

The Mining Journal, RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1677.—Vol. XXXVII.

LONDON, SATURDAY, OCTOBER 12, 1867.

(WITH SUPPLEMENT) (STAMPED SIXPENCE UNSTAMPED FIVEPENCE)

MR. JAMES CROFTS, STOCK AND SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.

HOLDERS of mining shares difficult of sale in the open market may find purchase for the same through Mr. Crofts' agency. Also parties requiring advice how to act in the disposal or abandonment of doubtful mining stocks may profitably avail of Mr. Crofts' long experience on the market in all cases of doubt or difficulty, legal or otherwise.

The standard for copper ore having advanced this week is a favourable reaction, and being indicative of further advances is important for shares in copper mines, of which advantage should be taken by capitalists to invest at low prices without delay. Mr. Crofts furnishes a select list of current shares, either for investment or speculation.

There are also symptoms of a general improvement in the tone of the Mining Market this week, and a stronger impetus may be given to prices much sooner than is generally anticipated.

Bankers: National Bank of Scotland, Finch-lane.

MR. JOHN BUMPUS (Successor to WILLIAM LANE),
44, THREADNEEDLE STREET, HAS FOR SALE:—

30 Calbeck Fells, 13s.	100 Frontino, 13s.	50 No. Treskerby, 32s 6d
50 Chontales, £4 17s. 6d.	35 Gt. So. Tolgus, 14s 3d	25 North Downs, 13s.
10 Clifton, £7 1/2.	15 Gt. Retallack, £3 1/2.	5 Providence, £29 1/2.
10 Chiverton, £6 1/2.	20 Gt. No. Downs, £4 1/2.	75 Prince of Wales, £5s 6d
75 Drake Walls, 13s. 9d.	10 Great Laxey, £18 1/2.	50 So. Condurrow, 14s 6d
5 East Basset, £10 1/2.	55 Gt. No. Laxey, 14s.	25 South Darren, 27s.
15 East Caradon, £2 1/2.	20 Hington Down, £29 1/2.	100 Rossa Grande, 12s 6d
25 E. Carn Brea, £2 11 1/2	40 New Quebrada, 20s.	5 West Caradon, £2 1/2
10 East Lovell, £8 1/2.	25 North Crofty, 20s.	50 Wb. Grenville, 32s 6d

GUIDE TO INVESTORS.—MR. LELEAN'S STOCK, SHARE, AND FINANCE REGISTER for October, contains a comprehensive review of the Stock and Share Markets; a list of all the dividends paid in August and September; a selection of investments paying 10 to 16 per cent.; and such information as is necessary to guide intending investors. 6d. per copy, 9s. 6d. annually, post free.

Published by Mr. BAKER LELEAN, at his offices, 11, Royal Exchange, London.

MR. W. L. WILKINSON, STOCK AND SHAREDEALER,
No. 29, THREADNEEDLE STREET, LONDON, E.C.

MR. JOHN BATTERS, STOCK AND MINING SHAREBROKER, 13, THROGMORTON STREET, LONDON, E.C.

MR. WILLIAM SEWARD, STOCK AND SHAREDEALER, 19, THROGMORTON STREET, LONDON, E.C.

MESSRS. WARD AND JACKMAN, STOCK AND SHAREDEALERS,
CUSHION COURT, OLD BROAD STREET, CITY, E.C.
Every description of marketable SHARES BOUGHT or SOLD, either for immediate settlement or account, at the closest dealing prices.

Bankers: London and Westminster, Lothbury.

MR. THOMAS THOMPSON, MINING OFFICE,
12, OLD JEWRY CHAMBERS, LONDON, E.C.

MESSRS. WILSON, WARD, AND CO., SHAREDEALERS,
16, UNION COURT, OLD BROAD STREET, LONDON, E.C.

BUYERS of any number of Frontino and Bolivia, and New Great Consols, shares at full market price. A special report upon New Great Consols Mine can be had on application, post free.

MR. G. D. SANDY, STOCK AND SHAREDEALER,
No. 48, THREADNEEDLE STREET, LONDON, E.C. TRANSACTS BUSINESS IN EVERY DESCRIPTION OF STOCK EXCHANGE SECURITIES, MINING AND FINANCIAL ENTERPRISES, at close market prices.

TAMAR VALLEY SILVER-LEAD.—The report from this mine is of a most satisfactory character. G. D. SANDY is in possession of private and reliable information, which justifies him in fearlessly recommending the shares. Correct Daily Price List may be had on application. Money advanced to any amount on legitimate stocks and shares. References exchanged.

JOHN RISLEY, STOCK AND SHAREBROKER,
(SWORN BROKER),
48, THREADNEEDLE STREET, LONDON, E.C.

Bankers: London and Westminster, Lothbury.

GEORGE RICE, STOCK AND SHAREDEALER, 78, OLD BROAD STREET, LONDON, E.C. (Member of the Mining Exchange). (25 years' experience). TRANSACTS BUSINESS IN MINING SHARES, at close prices OFFERS WANTED FOR:—

60 Bryn Gwlog.	75 Sithney Metal.	10 West Stray Park.
60 East Chiverton.	10 Tolcarne.	4 West Frances.
60 Great Fortune.	80 Redmoor.	10 West Caradon.
2 Nevada.	50 Wheal Crobar.	

Money advanced on good mining shares. Bankers: Bank of England.

MR. EDWARD BREWIS, PALMERSTON BUILDINGS,
34, OLD BROAD STREET, LONDON, E.C., has BUSINESS at net prices in all SHARES dealt in on the market.

Bankers: National Bank, London, E.C.

MR. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, has BUSINESS in the following shares for cash or time on:—

*Clifton.	*Frontino.	*Prince of Wales.
*Chiverton Moor.	*Gawton.	*North Treskerby.
*Chontales.	*Great North Downs.	*South Grenville.
*Devon Consols.	*Great South Chiverton.	*Wheal Seton.
*Don Pedro.	*Great Retallack.	*West Seton.
*East Russell.	*Marke Valley.	*Wheal Agar.
*East Carn Brea.	*North Crofty.	

PRINCE OF WALES.—From my report this morning I find that they are still driving north on the cross-course in the 55, where the lode is worth 12s. per ton, and likely to improve—a splendid looking thing. The 55 east is worth 14s. per ton. The cross-cut north towards the north lode is progressing favourably, the ground highly mineralised, and letting out a quantity of water. The mine will be clear of stuff next week, when full operations will be commenced. I am a BUYER of any part of 2000 East Carn Brea, 500 Chiverton Moor, 1000 Frontino, 200 Rossa Grande, 500 Don Pedro, 1000 Wheal Agar, 300 North Crofty, 500 North Downs, 300 Wheal Grenville, 200 Bedford United, 10 Wheal Seton; and a SELLER of Chontales and East Russell for time on.

SPECIAL BUSINESS in the shares marked thus *. Money advanced on good mining shares. Office hours from 10 to 4.

Bankers: Bank of England.

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C. (Established 13 years), has FOR SALE the FOLLOWING SHARES, at net prices:—

40 Gt. So. Tolgus, 14s.	25 E. Grenville, £2 3s 9d	15 E. Carn Brea, £2 11 1/2
4 Providence, £29 1/2.	15 Chiverton Moor, £5 1/2.	5 Gt. Wh. Vor, £17 1/2.
30 Don Pedro, £29 1/2.	20 Drake Walls, 12s. 9d.	1 West Tor, £16 1/2.
15 Marke Valley, £6 3 1/2	25 No. Treskerby, 32s. 6d	50 Frontino, 13s. 3d.
4 East Basset, £10 1/2.	4 South Frances, £37 1/2.	20 No. Downs, 12s. 9d.
25 So. Condurrow, 12s 9d	30 Wheal Agar, 30s. 9d.	10 West Basset, 21s.
50 Rossa Grande, 10s.	25 Pr. of Wales, 53s. 3d.	5 Gt. Laxey, £18 1/2.
10 East Caradon, £2 3 1/2	10 Gt. Retallack, £4 1/2.	10 Gt. No. Downs, £4 1 1/2
30 Wh. Grenville, 32s 6d	5 Mary Ann, £17 1/2.	1 Wheal Seton, £112 1/2.
5 Tincroft, £12.	4 W. Chiverton, £64 1/2.	30 Chontales, 16s 3d. p.t.
1 Basset, £24 1/2.	20 East Russell, £21s. 6d	5 West Caradon, £2 1/2
40 West Kitty, 9s. 9d.	25 West St. Ives, 7s. 6d.	30 North Chiverton.

MR. GEORGE BUDGE, STOCK AND SHAREDEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 17 years), has FOR SALE at net prices:—50 Don Pedro, £2 1/4 prem.; 70 Frontino and Bolivia, 13s.; 100 Rossa Grande, 10s.; 200 Anglo-Brazilian; 30 South Condurrow, 13s. 6d.; 15 Rose and Chiverton United; 100 West Tremayne, 7s.; 100 Redmoor, 5s.; 110 West St. Ives; 50 Crebar, 6s.; 25 East Rosewarne, 7s. 6d.; 15 Colquhoun and Callington United, £2 1/2; 5 West Frances, £10; 50 Okei Tor; 50 West Wheal Kitty, 10s.; 25 North Crofty, £3 19s.; 10 Wheal Uny, 22s.; 35 Wheal Trannack; 20 East Laxey; 20 East Bottle Hill; 1 Devon Great Consols; 2 Minera, £19 1/2; 50 South Darren, 25s.; 20 West Drake Walls, 6s.; 50 Gawton; 20 Great South Chiverton, 11s. 6d.

Mr. BUDGE recommends the purchase of Minera, Maes-y-safn, South Caradon, Gawton, and Rose and Chiverton.

STOCK EXCHANGE SECURITIES.—THE LONDON DAILY RECORD, STOCK AND SHARE LIST (entered at Stationers' Hall). Annual subscription, £1 1s.; by post, £2 5s.; monthly subscription, by post, 4s.; single copy, 1d.—by post, 2d. Published by PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London, E.C.

This Stock and Share List is published every evening at 5 o'clock, and contains the latest prices of railways, banks, colonial government securities, Cornish and Devon mines, gold mines, insurance, foreign railways, and miscellaneous shares; comments made on the daily operations in stocks and shares, showing the rise and fall in prices. Forwarded by same night's post to subscribers (to regular customers free). Shareholders or investors about to operate in stocks or shares can be furnished with the list on application.

N.B.—The present is a most favourable opportunity for the investment of capital in several foreign stocks, railways, mines, banks, &c., which, on the present market price, are paying in interest or dividends at the rate of 10 to 15 per cent. per annum.

THE LONDON DAILY RECORD—STOCK AND SHARE LIST—STOCK EXCHANGE SECURITIES. Published every evening at 5 o'clock. It contains the latest prices of railways, banks, mines, foreign stocks and bonds, financial, insurance, and miscellaneous shares, remarks on the daily rise and fall in prices, with advice as to purchase and sales. Annual subscription, £1 1s.; by post, £2 5s.; monthly subscription—by post, 4s.; single copy, 1d.; by post, 2d.

PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

INVESTMENT OR SPECULATION.—A SELECTED LIST OF RAILWAYS, BANKS, MINES, COLONIAL SECURITIES, FOREIGN GOVERNMENT BONDS, &c., forwarded to bona fide investors on application. In addition to the high rate of interest many of the above are paying, there is now every probability of a great rise in market value.

PETER WATSON, STOCK AND SHAREDEALER, 79, OLD BROAD STREET, LONDON.

(three doors only from Hercules-passage, entrance to the Stock Exchange).

Twenty-three years' experience.

(Two in Cornwall and Twenty-one in London.)

Bankers: The Alliance Bank, and the Union Bank of London.

References given and required (when necessary) in all the principal towns of the United Kingdom.

PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," of Friday, Oct. 11, No. 445, Vol. IX., price 6d. each copy, forwarded on application. Contains information on the following mines:—

North Wheal Chiverton.	Prosper United.	North Downs.
West Chiverton.	Great South Tolgus.	East Caradon.
Trumpet Consols.	West Wheal Kitty.	Don Pedro.
East Wheal Lovell.	West Caradon.	Frontino and Bolivia.
North Wheal Crofty.	North Treskerby.	Chontales Gold.
Great Wheal Vor.	Marke Valley.	Pestarena.
West Great Work.	Prince of Wales.	

With a Leading Article on Mining and its Prospects; Remarks on the Future Prospects of Mining in the Marazion district; Advance in the Copper Standard, &c., &c.

PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London, E.C.

MR. EDWARD COOKE, STOCK AND SHAREDEALER,
76, OLD BROAD STREET, LONDON, E.C.

EDWARD COOKE has visited the mining district of Cornwall during the present week, and will feel much pleasure in affording information on the mines in the Chiverton, Great Wheal Vor, and Helston districts, which latter includes East Wheal Lovell, Trumpet Consols, and other mines.

Orders for all kinds of Stock Exchange securities, either by letter or telegraph, promptly attended to.

N.B.—A Daily Price List on application.

Satisfactory references given in any town in the United Kingdom.

Bankers: Alliance Bank.

MR. W. H. CUELLO, (late of the firm of WATSON AND CUELLO), STOCK AND SHAREDEALER,
1, FINCH LANE, CORNHILL.

Reference exchanged.

All transactions can be for cash or account.

Bankers: Bank of England.

MR. JOHN R. PIKE, STOCK AND GENERAL SHAREDEALER, has FOR SALE SHARES in the following mines:—

20 Grenville, £1 11s.	20 Chiv. Moor, £5 10s.	5 Grambler, £3.
25 East Grenville, £2 3 1/2	50 Dale, 3s. 3d.	20 No. Treskerby, £1 12 6
15 E. Carn Brea, £2 10s.	2 East Basset, £15.	50 So. Condurrow, 16s 9d
10 Marke Valley, £6 3 1/2	20 E. Russell, £1 7s.	

For immediate purchase, Mr. PIKE advises Tamar Valley Silver-lead Mine shares, which cannot fail to handsomely remunerate the investor. Shares can now be had at a few shillings, which in a few months are expected to be worth as many pounds.

12, St. Michael's-alley, Cornhill, London, E.C.

MR. JAMES HUME, 74, OLD BROAD STREET, MEMBER OF THE MINING EXCHANGE, LONDON.

TRANSACTS BUSINESS in all description of railway stocks, mine shares, and miscellaneous securities, at net prices, and at margins of 1 1/4 per cent. on mine shares, and 3/4 per cent. on railways.

Mr. HUME having returned from Cornwall is enabled to give valuable information respecting several mines likely to have a great rise in value, and will forward a selected list of shares on application.

Bankers: The London Joint-Stock Bank.

BARTLETT AND CHAPMAN, STOCK AND SHAREDEALERS, 2, BUCKLESBURY, LONDON, E.C.

BARTLETT AND CHAPMAN'S "Investment Circular and Financial Review" for this month is now ready, and should be consulted by all who wish to make safe and profitable investments.

Bankers: London and Westminster Bank.

WALTER TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C., DEALS IN ALL DIVIDEND AND SOUND PROGRESSIVE MINE SHARES, either for cash or the fortnightly settlement at close market prices.

Has BUSINESS in St. John del Rey, Don Pedro, Anglo-Brazilian, Frontino, Rossa Grande, Chontales, Port Phillip, and Pestarena.

WALTER TREGELLAS can confidently recommend the Taquaril Gold Mine. Full and reliable information on application.

Bankers: Alliance Bank.

MR. JAMES B. STOCKER, PALMERSTON BUILDINGS, OLD BROAD STREET, AND MINING EXCHANGE, LONDON, E.C., STOCK AND SHAREDEALER.

Mines, British and Foreign Colonial Securities, Railway, Bank, Miscellaneous, and every description of shares BOUGHT and SOLD at the closest dealing prices for cash or account.

Bankers: London and Westminster.

MATTHEW GREENE, STOCK AND SHAREDEALER,
ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.

MATTHEW GREENE recommends for immediate purchase Tamar Valley Silver-lead shares, now selling for a few shillings per share, and certain for a rise to as many pounds in a few months. Parties desirous of investing in this most promising lead mine should apply at once. Plans, specimens of the lode, and every particular can be had at M. G.'s office.

M. G. confidently asserts that no such chance is at present to be had as the shares in this mine.

Mr. GREENE is most desirous that all parties meditating taking shares should first either see for themselves, or send a competent mining agent, to whom on application M. G. will be happy to give an order to inspect the property.

The agent of this mine writes that a more healthy and promising lode is producing large quantities of rich ore cannot be seen.

INVESTMENT, LOAN, AND BANK AGENCY.

Established 1839.

Investments and Sales of every description of Public Securities can be effected, either for immediate or deferred settlement, as may be agreed upon.

Loans granted, for one year or any shorter period, on Stocks and Shares having a market value.

DEPOSITS of all amounts received at 5 per cent.

Bank and Money Agency Business generally undertaken.

RICHARD TAYLOR AND COMPANY.

No. 12, Clement's-lane, Lombard-street, London, E.C.

MR. CHARLES THOMAS, MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER,
3, GREAT ST. HELEN'S, LONDON, E.C.

In the Press.

MINING FIELDS OF THE WEST: A PRACTICAL EXPOSITION OF THE PRINCIPAL MINES AND MINING DISTRICTS OF CORNWALL AND DEVON.

Published by CHARLES THOMAS, at 3, Great St. Helen's, London, E.C.

One Shilling. Post-free, fourteen stamps.

MESSRS. LANE AND GIBBS, 2, ROYAL EXCHANGE, LONDON, E.C. (Members of the Mining Exchange), STOCK AND SHAREDEALERS, transact business in all kinds of securities at closest net prices for cash or account.

Daily price list on application.

Bankers: London and County Bank.

MARKE VALLEY, AND EAST CARADON MINES.—We have persistently, for the past eighteen months, recommended our correspondents to continue their holdings, and, in the event of not being shareholders, to invest in these mines.

The present prices of shares, and the dividends paid during that time, are sufficient proof of the genuineness of our counsel. We do still, and most consistently with the best of advice, continue to urge a further investment in both. None have paid greater attention than ourselves to the merits of the locality in which these mines are situated—viz., the Caradon mining district; and we venture an opinion that, whilst some of the western districts of Cornwall will become abandoned, this will not only, as at present, be the star of the East, but the star of the county. Our reasons for recommending these two mines in particular, amongst the many good and profitable ones about Caradon Hill, are too lengthy for an advertisement, but applications to us, accompanied with a fee of £1 1s. (which will be returned in the event of business), will be attended to.

BUYERS of West Rose Down, North Phoenix, Marke Valley, and East Caradon, at fair market prices.

SAFE INVESTMENTS, paying 5 to 20 per cent. per annum on outlay.

SHAREHOLDERS, CAPITALISTS, AND INVESTORS requiring valuable and reliable information, and seeking safe, sound, and profitable investments, should at all times consult

SHARP'S INVESTMENT CIRCULAR

Post free. It is a safe guide for executors, trustees, and others.

GRANVILLE SHARP, STOCK AND SHAREDEALER,
32, POULTRY, LONDON, E.C.

Established 1852.

MR. J. B. REYNOLDS, STOCK AND SHAREDEALER,
70 and 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.

MR. REYNOLDS has SPECIAL BUSINESS in the undermentioned mines:—

East Lovell.	Gothic.	Great Laxey.
West Wheal Kitty.	North Retallack.	Rose and Chiverton.
Great Wheal Vor.	Great South Chiverton.	Dale.
Cuddra.	West St. Ives.	West Prince of Wales.
	Prince of Wales.	

Established Ten Years. Member of the Mining Exchange.

Bankers: City Bank.

MR. HENRY MANSELL, STOCK AND SHAREDEALER,
No. 44, THREADNEEDLE STREET, LONDON, E.C.

MR. HENRY MANSELL, having had twelve years' experience in the Mining Market, now begs to offer his services in the purchase and sale of Stock and Mining Shares. References exchanged.

Bankers: London Joint-Stock Bank.

MESSRS. POWELL AND MOSS, STOCK AND SHAREDEALERS, 78, OLD BROAD STREET, LONDON, E.C., and Mining Exchange, London, E.C.

Messrs. POWELL and MOSS have large dealings in the principal Market Mines. They are also prepared with a selected list of shares for investment or speculation.

SPECIAL BUSINESS as BUYERS or SELLERS of shares in the Gold Mines.

Bankers: Bank of England.

MR. R. EMERSON, 28, GREAT WINCHESTER STREET, LONDON, E.C., has the following SHARES FOR SALE:—100 Dale, 2s. 6d.; 5 Rose and Chiverton, 2s. West St. Ives; 50 Lady Bertha, 1s. 6d.; 50 Budnick Consols, 50 Gwydyr Park, 2s. 6d.

Advice given on the sale and purchase of shares.

Eighteen years' experience in Cornwall and Thirteen in London.

CHONTALES GOLD COMPANY.—FULL PARTICULARS of the DIFFERENT CLASSES OF SHARES can be obtained on application to Mr. J. H. MURCHISON, No. 8, Austin Friars, E.C.

MR. J. N. MAUGHAN, STOCK AND SHAREBROKER
(Member of the Stock Exchange).

No. 2, COLLINGWOOD STREET, NEWCASTLE-ON-TYNE.

Transacts business in Railways, Funds, and every description of Mines.

Bankers: Messrs. Lambton and Co.

MR. E. J. BARTLETT, of 30, GREAT ST. HELEN'S, E.C., can RECOMMEND INVESTMENTS that will WELL REPAY for CAPITAL EMPLOYED. A Selected List on Application.

SPECIAL BUSINESS in North Crofty, West Godolphin, Prince of Wales, and Great Laxey.

Will shortly be published, a carefully compiled work as a Guide to Investors.

MR. THOMAS SPARGO, STOCK AND SHARE DEALER,
224 & 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

Bankers: Consolidated Bank, Threadneedle-street.

JAMES SCOTT AND CO., STOCK AND SHAREDEALERS,
1, PINNERS COURT, OLD BROAD STREET, LONDON, E.C.

Mine Shares and all Stock Exchange securities dealt in at close market prices for cash or the bi-monthly settlement. References given.

JAMES SCOTT and Co. are the proprietors of the "British and Foreign Mining Circular," published immediately after the Stock Exchange fortnightly settlements.

MESSRS. KEANE AND CO., MINING AGENTS, AND SHAREDEALERS,
90, CANNON STREET, LONDON, E.C., and BRIDGEWATER CHAMBERS, BROWN STREET, MANCHESTER.

MESSRS. J. TAYLOR AND CO., FINANCIAL, MINING, AND GENERAL AGENTS, 17, CROSS STREET, MANCHESTER, have the following SHARES FOR SALE:—

50 New Birch Tor	30 Cashwell.	5 West Caradon.
Vitifer.	20 Great Mona.	

J. TAYLOR and Co. have still a few of the second issue of Great Mona shares on offer, the immediate purchase of which they strongly recommend.

MR. J. S. MERRY, ASSAYER AND ANALYTICAL CHEMIST,
SWANSEA.

MR. THOMAS THOMAS, ASSAYER, &c., COPPER ORE WHARVES, SWANSEA.

ASSAY OFFICE AND LABORATORY,
No. 2, CROWN CHAMBERS, CROWN COURT, THREADNEEDLE STREET.

CONDUCTED BY W. T. RICKARD, F.C.S., &c.

(Late MITCHELL and RICKARD).

Assays and analyses of every description of mineral and other substances, manures, &c.

Gentlemen going abroad for mining purposes instructed in assaying, and the most improved methods of reducing gold, silver, and other metals.

MINING PROPERTIES INSPECTED AND REPORTED ON.

NOTES ON FORESTS AND WATER SUPPLY.

Sir,—Very greatly against my will, and at the urgent solicitation of two chemical friends, who insist that it is imperative upon me to reply to the last shallow argument adduced in Mr. Weldon's letter, regarding the wet and dry process of recovery or regeneration, I will do so, but as briefly as possible. Although mostly using the dry process of recovery, yet I have asked for—the certificates of well-known and respectable chemists in support of Mr. Weldon's allegations—namely, that the wet process, as produced by the simple contact of atmospheric air upon the precipitated protoxide by mere exposure. Nor can such process be a secret to anyone who has ever precipitated the oxide of manganese at all, as witnesses the following quotation, among very many which could be brought forward:—"When alkalies are added to solutions of these compounds, the white hydrated oxide (of manganese) first precipitated at once becomes brown by passing into a higher state of oxidation." (*Townsend's Chemistry*, 4th edition, page 326.) But all this proof and argument about the patent rested upon a worthless nothing. Let any reader refer to the title of this patent, and he will at once see that what I say is true in making chlorine," and no more, viz., 1848, date 1866, is for "Improvements in making chlorine," and no improvements in making chlorine are described. The improvements described are for the regeneration of the manganese after the chlorine has been made. The reason given for this improvement is, that a specification is made in the old humdrum way, and long since in use among manufacturers, and described in every book on chemistry, namely, by heating a mixture of hydrochloric acid and manganese, but Mr. Weldon says he employs for this purpose sesquioxide of manganese, recovered in a peculiar way—then the patent ought to have been for the recovery of the manganese in this peculiar way. Now, if all the manufacture and recovery of the chlorine, in which there is nothing new. Nor, if all the manufacture and recovery of the above sesquioxide of manganese, prepared in all the known oxides and mixtures in the remotest degree, for this reason—that all the known oxides and mixtures of oxides of manganese capable of producing chlorine have been used over and over again for obtaining chlorine in this very way, and no new mode of preparing such material—the patent cannot be so claimed. Therefore, as the title is for the recovery of the manganese, and the invention is for treating an oxide of manganese, the title and the invention do not correspond and agree, and the patent is, in consequence, null and void, and is what I stated in my last, not more than the paper which it is printed. I have not been at the trouble to call you to your last, and citations of the abusive and insolent letters which appear in one or two passages, how much speak both for themselves and their writers. One or two passages, however, I will advert to. Mr. W. Thomas speaks of his action at law—that action was advised not to proceed with, simply because it was based upon the word of the defendant, upon which I had so unfortunately rested, and the object of the action was not, as he says, for dismissal, but to recover damages from him; and his colleagues for worming out my secrets, and not fulfilling their bargain faithfully promised.

Again, with regard to Mr. Walter Weldon, and as one sample among many of truthfulness in this person, he says of me "He has claimed to have invented a method of bleaching by means of chlorine water, which was introduced by Dr. Rollet in 1746 and 1786." I have certainly experimented upon chlorine water, and may do so again, but where have I claimed to have invented it? If in these terms, or in any publication whatever, he can show that I ever did make such

Sim.—I apprehend that the dismissal of the petition to wind-up this company will not suffice to reassure the disaffected shareholders, unless the present board be superseded, or so modified as to inspire confidence that the fund will be judiciously managed. From personal observation I can bear testimony that the promoters of the movement in Manchester, to attain the above object, were actuated by the purest motives for the true interests of the company; and if those doubtful of their intentions had the same opportunity, they would acquit them-

GUN-COTTON.—In the opinion of Messrs. Pelouze and Maury, Gun-cotton is susceptible of spontaneous decomposition and explosion at very low temperatures when stored in considerable quantities. In a paper read to the Royal Society, at a Meeting held on 8th, December, 1865, the following observations at Woolwich during the last four years, both with large and small quantities of gun-cotton, for the purpose of completely investigating the conditions of stability of this substance. The following are the facts ascertained :—1. Gun-cotton prepared according to Von Lenk's method may be exposed to diffused daylight, either in the open air or in closed vessels, for very long periods without any perceptible change. 2. The preservation of the material for three years and a-half under these conditions has not produced any decomposition. 3. Exposed to the substance in a condition of ordinary dryness to strong daylight and sunlight produces a very slow change, so that there is no rapid decomposition whatever.—3. If gun-cotton in closed vessels is left for protracted periods exposed to strong daylight or sunlight in a damp or moist condition it is affected to a somewhat greater extent.—4. Gun-cotton exposed to sunlight until a faint acid rain is perceptible, and then immediately afterwards packed in its original boxes tightly closed, does not undergo any decomposition during its long storage periods.—5. Gun-cotton prepared and purified according to the prescribed system, and stored in the ordinary dry condition, does not furnish any indication of alteration beyond the development, shortly after packing, of a slight peculiar odour, and the power of gradually imparting to litmus, when packed with litmus paper, a pinkish tinge.—6. Exposure to temperatures considerably exceeding those of tropical climates produces no influence. Gun-cotton may be conveyed with perfect safety than gunpowder.—7. Pure gun-cotton, or containing only a very small

Mr. JOHN COLLINSON, C.E., F.R.G.S., said—The subject on which I have been requested to express my views to this meeting is one on which

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antimony is left in the delivered lead; in this case for removing the antimony the run-down lead must be placed in a calcining furnace and brought to a red heat, or still better, some common salt is placed in the run-down lead. In place of melting down in a blast furnace one can also melt in a calcining furnace the delivered lead, which will be alloyed with zinc, and then remove the zinc still remaining in the lead by green wood; also without a blast furnace or calcining furnace, merely by keeping the lead heated for some hours with wood, the whole of the zinc will be removed; the blast-furnace process is, however, to be preferred. Up to this time it was unknown that zinc could be completely removed from lead by the use of green wood; steam can also be employed.

The alloy of lead, zinc, and silver is likewise run down in a small blast-furnace with siliceous slag, only in this case the slag must contain about 36 per cent. of siliceous earth. In the melting down no loss of silver will be found to have taken place, and the pressure of air used therewith should amount to 18 centimetres of water pressure; the rich lead obtained is then, as usual, refined in the cupel. The zinc oxide can be taken off by a comb or water apparatus; it also succeeds well to bring about the separation of the metals in the alloy of lead, zinc, and silver by, however, preferable. By the process of distilling off the zinc from the silver alloy too much loss of silver arises. The delivering of lead by zinc was first attempted by Parkes, no gain was however found in the process, because the method, from want of knowledge of the essential conditions, was not economical and the lead always remained alloyed with zinc.

PREVIOUS DISCOVERIES OF TIN IN THE UNITED STATES.—Prof. Foster states—A single crystal of tin was found, many years ago, by Professor Hitchcock, at Goshen, Mass. Prof. C. U. Shepard found a few minute crystals at Cummingtown, in the same State, and Prof. W. B. Rogers detected its presence in the gold-bearing slates of Virginia. Dr. Jackson, in 1840, at Jackson, N.H., discovered three or four small veins, which, though mined upon, yielded no economical results. Prof. Whitney has described a locality of tin in the Temescal range of California, which is of no economical value. The discovery, therefore, of an extensive system of stanniferous veins in Missouri under conditions which characterise like deposits in Cornwall, Zinnwald, and Altenberg, is certainly an event in American mineralogy, and it is to be hoped will lead to economical results. (The particulars of this discovery were given in a letter from a Correspondent in the *Mining Journal* of Aug. 17.) The annual imports of tin, and all manufactures of tin, into the United States now exceed \$5,000,000—four-fifths of which is imported from Great Britain. If this demand could be supplied from the product of our own mines, it would contribute essentially to the national industry.—*American Journal of Mining*.

GOLD MINING IN VICTORIA.—The returns for the first six months of the present year show exports of Victorian gold amounting to 779,210 ozs.; if we allow for the banks holding 18,798 ozs. less on the 30th of June than on the 1st of January we get at the net yield of gold for the half-year, 730,412 ozs. The average number of persons engaged in mining last year was 73,479, and taking the gold obtained by them at 41. per oz., their individual earnings would amount within a fraction to 31s. per week. During the six months ending June 30 last the average number of miners was 67,064, showing that 441 persons had abandoned gold digging for other pursuits. With the decrease in the number of men employed there has come increased remuneration, for the 730,412 ozs. obtained during the first half of this year gives to each man a weekly wage of 23s. 6d. Out of the total number of miners given above nearly 19,000 are Chinese. The total area of land mined on in the colony amounts to 853 square miles, and the approximate value of the mining plant employed is £2,071,648. Over six millions sterling are invested in mining enterprises in the colony.

COPPER IN NATAL.—By far the most important mineralogical discovery yet made in this colony is that which has come to light during the present week. Hitherto the discoveries of copper have been out of the colony and at some distance from our port. Griqualand, on the south, and Zululand, on the north, were the nearest localities where mineral wealth was known substantially to exist. It may be remembered that the mines in the first of these places owed their discovery to the natives, who by the natives for despoiling their herds. The attention of Mr. Shepstone, Secretary for Native Affairs, was attracted by this circumstance to a similar incident, noticed by him 18 years ago within the boundaries of Natal. In course of time he succeeded in identifying the exact locality, and Mr. Warne, a practical miner of 30 years' experience, has just returned from a nine days' prospecting trip, bringing with him about 30 lbs. of metallic copper rock, consisting chiefly of carbonate of copper mixed with quartz and friable clay. These specimens are poor, being from near the surface, but they give every promise of a richer yield beneath. These are taken from a vein wide, running from north-east to south-west, and probably extending for some distance, as similar indications have been found at other places. The most important feature of the discovery, however, is its nearness to the coast, the lode being more than seven miles from the sea, and little more than that distance in the tidal range of the Umkomazi, where the river becomes navigable and accessible by small vessels. A township has already been laid out at this little harbour, which is only 30 miles south of Durban. The distance of the lode by land is only about 27 miles, 13 of which is a dead level. It is impossible to overrate the value of this discovery to the colony in general, and to Durban in particular, should the lode prove, as is fully expected, to contain rich copper ore. We may say that the land all round is set apart for the use of the natives, and Government will, therefore, have the disposal of the affair in their own hands. In all probability these mineral indications are but precursors of further discoveries. They occur in a range of hills which runs parallel with the coast from the Amadiba, through Natal and into Zululand. We know that at the southern extremity copper of fine quality exists. We now find that copper is to be found at a high point near the lode. Rumours of similar traces have been spoken of in the Inanda, yet more to the north. An intelligent traveller tells us that just over the Tugela, in Zululand, a race of ancient native smiths still reside. These people were spared during the massacres of Chaka on account of usefulness, and the appearance of the country in that direction indicates great mineral richness. It is not extravagant, therefore, to believe that the time has arrived when the hidden treasures of the rocks in this part of the world, so long concealed, are at last about to be explored and ascertained. Government has placed 1000l. on the estimate for next year in aid of mineralogical explorations. We may mention, by the way, that an outcrop of coal shale has been observed near the lode. —*Natal Mercury*, Aug. 10.

MINERAL WEALTH OF JAPAN.—Mr. Gower, the British Consul at Yokohama, refers in his report of this year to the minerals which abound in Japan, and states that he has visited some of the rich mines which have been abandoned through mere ignorance of the first engineering principles, and through disregard for economy of time and labour. Near Ono, a village 12 miles from Hakodadi, there is a good lead mine, situated in a valley well supplied with the necessary wood for arming the galleries, and plenty of water to run machinery, were operations are actually ordered to cease when the vein of lead was over 3 ft. wide. Further on some 40 miles, in the neighbourhood of Sendai, and in almost as favourable a position, there is another neglected lead mine, which contains about 2½ per cent. of silver; but here also the veins have been followed from the surface, where they are comparatively thin, instead of descending into their thickness. Many spots where this mineral is found are left unworked. Copper and iron are found in different forms. On the east coast the iron has gone over miles and miles of iron-sand, which is said to contain over 10 per cent. of pure metal. Gold is found in small quantities in the vicinity of Sendai. There are also springs of asphaltum, with every indication of the probable presence of petroleum not far below the surface. Coal is plentiful. To use the expression of a native officer, cliffs of pure coal form part of the east coast near Sendai, where the waves wash it into the sea. Russian men-of-war are allowed to help themselves freely to coal, which the Japanese have waste near their frontiers at Karakinnal. Again, at Iwanai, close to a fair anchorage in the Japan sea, the Consul visited a rich mine of excellent soft coal, which burns with a clear flame, gives great heat, and is almost free from ashes; the proportion being 35 per cent. pure coke, 35 per cent. bituminous matter giving gases, and 10 per cent. ash. An engineer employed in saw mills belonging to a British firm at Hakodadi told the Consul, in a written report, "as good as any English coal he has ever seen." The mines, or aborigines of Yesso, are so restricted in privileges and totally confined by their despotic rulers, that this interesting race may be considered as slowly disappearing, and gradually being replaced by natives of the islands.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending Oct. 6 was 10,503l. 10s. 1d.

HOLLOWAY'S PILLS—COUNSEL AND COMFORT.—A disordered stomach throws the whole system out of gear, and renders us unfitted both for work and amusement. A few doses of these strengthening and purifying pills, regular, and re-enable the stomach to digest its food without difficulty. These excellent pills are suitable alike for the poor and the peasant, the soldier and the sailor, and particularly for home and foreign colonists. Holloway's pills are most useful in checking feverish attacks, bilious complaints, and inflammations. They have also made the most signal cures in cases of dropsy and diseases of the liver, heart, and lungs, when the sufferer seemed past the reach of medicine.

MINING NOTABILLIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

WHEEL EMILY.—It is gratifying to find that steps are being taken to procure a powerful engine to work that well-known property near Callington, Cornwall, which has produced such large quantities of silver gossan of very high percentage, and possesses all the elements necessary to secure the adventurers success in their undertaking.

PENHALE WHEAL VOR.—As will be seen by the details of the general meeting of shareholders (which appear in another column), it has been determined to develop this mine to a greater depth. Large quantities of ore were raised from the upper levels, and the most confident opinions are expressed that, like its neighbour, Great Wheal Vor, which is in the same channel of ground, profitably productive results will be realised in depth.

TAMAR VALLEY SILVER-LEAD MINE.—Good progress is being made in the sinking of the shaft. The indications are most satisfactory, and the ground is everything a miner could wish to see.

WEST GREAT WORK is opening out one of the richest tin mines in the Great Wheal Vor district. It is now leaving a small monthly profit, and is expected ere long to enter the Dividend List.

NORTH WHEAL CHIVERTON.—During the last few days a winze has been commenced sinking below the 80, west of Mew's shaft, which has greatly improved, and now worth about 10 cwt. of rich silver-lead ore per fathom, or, say, 12l. to 13l. per fathom. This clearly shows the greater the mine is developed in depth, the richer it will become.

MINING IN CARDIGANSHIRE.—Although the Bwadrain Mine, situated on the banks of the Rhedol, and parallel with Bronfloyd, was acquired but a short time since by a small party of influential capitalists, it is rapidly approaching a dividend-paying state. Nearly all the machinery has been erected, and the dressing-floors are almost completed. Dressing operations have commenced, and it is believed that the first sale, of 40 tons of ore, will take place in the course of the present month, and that thenceforward the sales will be monthly. The reserves in the mine are estimated to be worth about 30,000l.

MINING AND ITS PROSPECTS.—In Peter Watson's "Weekly Mining Circular and Share List," No. 445, Vol. IX.—"There has been throughout the week an alternating aspect in reference to the continental question that are altogether so much attended to, and therefore, there has been a corresponding amount of fluctuation in the quotations of leading securities, more especially in foreign bonds. The market value of mine shares, however, is never adversely affected by such causes; on the contrary, it often happens that during periods like the present a marked improvement sets in, which, probably, is to be accounted for by the fact that that portion of the investing public who choose foreign bonds as their channel of investment transfer their attention to dividend and *bona fide* progressive mines, which results show, after all, not nearly so speculative, while the profits realised, either by an advance in market value, or on the receipt of periodical bi-monthly or quarterly dividends, are oftentimes considerably greater than can be possibly realised by any foreign bonds, although purchased at the minimum price. During the whole of the past week I have been engaged in visiting the leading Cornish mines, and the information thus obtained will, I doubt not, prove as advantageous to my customers as it will afford me pleasure and satisfaction in communicating it."

[ADVERTISEMENT.]

From Mr. R. EMERSON.—"For sometime past I have recommended WEST ST. IVES, and a look at the reports, and the actual condition of the mine, bears out my most sanguine expectations. The account that was sent for insertion in the *Journal* last week did not appear, but the information was not of less value, as it was a more complete and accurate statement of the mine, and the lode unfavourably for a time, has tended, as I fully expected, but to improve the condition of matters, for the information shortly followed on a similar change some time since was most favourable, as in this instance. West St. Ives will be a great mine, and the buyers now coming forward confirm this conviction. The present low price for BUNICK CONSOLS shares is attracting the attention of capitalists. I recommend my friends to purchase without delay. A great rise in the price is evident."

RATING BLAST-FURNACES "OUT OF BLAST."—The opinion of Mr. G. H. Barker, has been taken as to whether furnaces "out of blast" are rateable for the poor. He affirms the rateability as a store place, and remarks that if such a property were to be entirely abandoned as a blast-furnace, and all the necessary machinery and material removed from the premises, the case would be like that of an empty house in the intervals of letting, and would not be rateable; but when the fires are merely blown out, and the property is so far disused as a blast-furnace, it is still occupied as a store place for machinery or material, and as such is, in his opinion, rateable according to its annual value as a store place merely. It appears to him to be impossible to distinguish a blast-furnace out of blast with the machinery or materials on the premises, from the case of a closed mill in which machinery is left, in Staley, Castleton, and Harter v. Salford. It is, like the closed mill, kept up for the purpose of keeping the machinery together, and the question in both cases is precisely the same—what the premises would let for to a hypothetical tenant, "who had the capacity to make such a use of them as could be made by a tenant." As regards a furnace "out of blast" in order that repairs may be done, he is of opinion that it is liable to be rated precisely as if it were in full work. In such a case, the rent which a hypothetical tenant could have paid would not be lessened because he stopped working the furnace whilst the repairs were being executed; and there is no distinction between this description of property and any other manufacturing or shop which is closed temporarily whilst repairs are being executed.

COMPANIES NOT COMMENCING BUSINESS WITHIN A YEAR.—In re the Metropolitan Railway Warehousing Company (Limited), the Lords Justices reversed the decision of the Master of the Rolls. The company had been formed for the purpose of building warehouses over an intended station, and the Metropolitan Railway Company. Delay having taken place in the acquisition by that company of the land required for the station, the Warehousing Company did not within a year from the time of its incorporation commence its business. A shareholder presented a petition to wind-up the company, and the Master of the Rolls made a winding-up order. The Court of Appeal, being of opinion that the lode was satisfactorily explained, and having regard to the objects for which the company was formed, discharged the order of the Master of the Rolls.

VARIANCE BETWEEN PROSPECTUSES AND ARTICLES OF ASSOCIATION.—Lord Justice Cairns recently affirmed the decision of the Master of the Rolls, in re Barne's Banking Company (Limited), holding that a person who applies for shares in a company formed under the Act of 1862 is, if the Articles of Association make his application. But even if those documents are not then in existence, he is bound to satisfy himself as to their contents at the very latest when he receives his allotment of shares. If he does not do so he is bound by the contents of the Memorandum and Articles, and cannot afterwards be heard to say that they differed from the statements of the prospectus on the faith of which he applied for his shares.

"JUST AND EQUITABLE" WINDING-UP.—The cases in which the Court of Chancery will, under section 79, clause 5, of the Companies Act, 1862, make an order to wind-up a company, because the Court is of opinion that it is "just and equitable" to do so, must be cases *ejusdem generis* with those mentioned in the former clauses of the same section—i.e., cases where there is something indicating insolvency of the company, or incapacity of the company for some other reason to carry on its business. Where something of this kind does not exist, the Court will not, against the wishes of the majority of the shareholders, make an order to wind-up a company, unless it has been absolutely impossible to carry on the business. Lord Justice Cairns thus held (on reversing a decision of Vice-Chancellor Malins) in the Suburban Hotel Company (Limited).

THE PANALOTON ENGINE.—An improved engine has been invented by Mr. J. B. PAGE, of New York, to which this name has been given, the novelty of the invention consisting in the means employed to convert a reciprocating motion into a rotary motion. The inventor believes that a uniform leverage—that is, a constant exertion of an equal amount of power at all points of the stroke—is better than the variable leverage of the crank, and that he has succeeded in developing a larger amount of power from a cylinder of a certain diameter with his improvement, than is possible with the crank. He has experimented for years, and is satisfied he has greatly added to the power of the ordinary engine. Its principal parts are a movable or sliding double toothed rack, in combination with a segmental pinion and rotating cam. The rack-frame, as secured to it at one end the piston rod of the cylinder, and slides in the ways. As the piston is sent forward and back, of course the rack moves with it. Engaging with the rack, alternately at top and bottom, is the segment of a pinion, secured to the main shaft, on which is the fly-wheel. Secured to the pinion is a cam, which as either end of the frame approaches the centre, or the main shaft, comes in contact with curved pieces, at the extremities of the rack-frame. The cylinder and steam chest are precisely like those of an ordinary engine, the other parts constituting the main differences. When the piston is moved

by the force of steam in either direction, it carries with it the rack-frame, and the rack, engaging with the segmental pinion, compels the shaft to make half a revolution. Part of this half revolution, however, is made by the momentum of the balance wheel, as the pinion is toothed only about two-fifths of its circumference. As the rack reaches the end of the stroke the cam rolls against the curved guides, and assists in throwing the rack in the other direction.

BLACKBAND—PENNSYLVANIA, U.S.

The development of blackband is still progressing, and new localities are opening to demonstrate its general existence as a bed. The ore at the original place of discovery in the McGinnes shaft is in very fine condition and in good and regular order. The "fault" recently encountered was too small and insignificant to deserve that title, and in a large and properly opened mine it would not have interfered with the production, or obtained particular notice. At the east slope the bed is also in black ore, and in good condition; while other openings to the east look favorable. We are able to make an emphatic assertion that the blackband is a regular bed, and no humbug, notwithstanding reports to the contrary. A few weeks more of exploration will satisfy the most sceptical on this point. The Belmont Coal Mining Company's property, consisting of about 1000 acres, has recently been sold to a wealthy New York Company, who will at once proceed to develop the property for blackband, and erect furnaces in due time. Those who use the blackband ore—the demand for which is greater than the present supply—state that the iron mine from it will render the importation of Scotch pig entirely unnecessary.

Recently we had the pleasure of visiting and examining the various blackband workings in the vicinity of Mill Creek, under the guidance of Mr. T. McGinnes, to whom we are indebted for much interesting information. The striking similarity of the ores taken out at the different openings, is of itself sufficient to convince the most sceptical of the great extent of the vein of ore. Nothing but the difficulty of procuring profitable leases from the landowners has prevented the extensive development of the ore in several places. At the McGinnes shaft, since the fault was passed, the vein is 20 in. thick, and of good quality. Close to this shaft are two abandoned slopes, which might be used to advantage if the company would either vigorously prosecute the work of mining on their own account, or lease it to some person with industry and energy enough to make the most of the good opportunity here afforded of obtaining an immense amount of ore. While mining continues on such a limited scale as at present, the yield of ore must be comparatively trifling. By making use of the old slopes, and driving tunnels back to the vein of blackband, a large quantity of ore might be taken out with comparatively little trouble and expense. Messrs. J. H. Winterstein and Co., who are opening the vein on the east side of Mill Creek, have penetrated the side of the hill a distance of 35 or 40 yards. They have taken out some rich specimens of ore, but it is the opinion of experienced men that they are working too near the surface to obtain the rich black ore so much sought for. The vein at present is from 10 to 12 inches thick.

On the Ravensdale estate, on what is known as the Dilcomb tract, Messrs. Kurtz and Liewellyn had opened the vein of blackband, at a point near the road to Eagle Hill, and close beside the railroad leading to Starr's Colliery. The black ore was found at a depth of only about 11 ft., but no further work has been done at this point, which is to be regretted, as the indications are that mining there would be very profitable. On the Ravensdale estate, also, Mr. Wm. Kurtz has opened a drift on what is supposed to be the McGinnes vein of blackband, about 200 yards from the place above mentioned. He has penetrated to the distance of about 30 yards, and is obtaining fine specimens of ore. The vein is about 2 ft. in thickness. We learn that Mr. Jas. Lanigan has struck the outcrop of the vein of blackband immediately behind his furnace, at St. Clair, and that he is confident of soon reaching the black ore.

At the slope of Jas. P. McGinnes and Co., which has been sunk to a distance of about 60 yards, the black ore is being taken out in large masses. The ore is extremely hard. The vein is 3 ft. 2 in. in thickness. Stakes have been driven for a railroad, to run from the railroad of the Feeder Dam Coal Company—which passes within 40 yards of the mouth of the slope—along the foot of the bank on which the ore is deposited, which will give them great advantages in the way of transportation. A drift has been run from the foot of the bank to the bottom of the slope, letting out all the water, and thus saving the trouble and expense of pumping. The Mill Creek Valley is an excellent location for furnaces, iron and steel works, and unless our people here and capitalists abroad are blind to their own interests, the time will come soon when the hills around it will be crowned with as many dozens of iron manufactories as there are now single deserted coal breakers. It is the opinion of those whose opinion is of value that the coal trade of this region will be of secondary importance when the blackband and other ores here shall have been fully developed; and if coal mines, iron mines, furnaces, rolling mills and foundries stand within sight of each other here, what is to prevent us from producing the best and cheapest iron and steel, and their products, in the world, and bidding defiance to foreign competition?

In regard to blackband, if our landowners would visit this locality, and examine and judge for themselves, instead of listening to designing croakers in our large cities, they would, no doubt, see the advantage of encouraging those enterprising and industrious individuals here who are only prevented from fully developing our immense mineral wealth by want of capital, and who too frequently get only their labour for their pains, in their well-meant efforts to make this country what it ought to be—the great mineral-producing region of the world. —*Pennsylvania Standard*.

THE METEOR-COMETIC THEORY (METEORS).—Mr. H. J. Church, of Colchester, writes—"A letter which I have just received, contains the rather puzzling query—"Do you think that there are such hard metallic substances in meteors as to forge a sword blade?" The following answer seems to suggest itself. There is a general tradition among the Tartars that the Siberian Iron formerly fell from the heavens. We have a tolerably authentic testimony of a like fall in India. The Right Hon. C. Greville, in a communication to the Royal Society (*Phil. Trans.*, 1808, Part I.), gives a very interesting paper, translated from the Emperor Jehangire's Memoirs, and thus saving the trouble and expense of a journey to the East. The royal historian adds, that on the incident of this iron lightning being manufactured a poet presented him with a distich that—"During his reign the earth attained order and regularity; that raw iron fell from lightning, which was, by his world-subduing authority, converted into a dagger, a knife, and two sabres." Other accounts of fallen stones almost exactly resemble this occurrence. The noticeable remark on the unmanageability of the iron tends to make the whole narrative highly credible, and throws additional weight on the inference drawn from internal evidence that the solitary masses of native iron found in different quarters of the globe have the same origin with the meteoric stones analysed by Howard and Vauquelin. Under these circumstances I am of opinion that the forging of sword blades out of meteoric substances harmonises with the historic notice we have concerning such a process. To return to the general character of meteors. Perhaps the most remarkable meteor of modern times is that which was seen all over England on March 19, 1818-19. It was first observed at 8½ about the Pleiades, when it moved after the manner of a falling star. The meteor in its way turned pear fashioned. Its colour was whitish, with an eye of blue of most vivid dazzling lustre, which seemed in brightness very nearly to resemble, if not surpass, that of the body of the sun on a clear day. Its height in a perpendicular line was computed to be 69 English miles from the earth's surface. It was about half a minute in passing from its first explosion to its last extinction, and it is said to have travelled at the rate of 300 geographical miles per minute. Some people imagine that they felt the warmth of its beams, others thought they were scalded by it. All accounts agree that there was heard the report of a very great cannon, which was soon followed by a rattling noise like firearms; this was attended by an uncommon tremor in the air, windows and doors in houses being sensibly shaken. Comets never come and go in this fashion; nor can we imagine the possibility of their substance or nucleus being forged into sword blades—therefore, it may be fairly concluded that the periodical shooting stars are quite distinct in their nature, effects, and orbits from comets. From various writers we collect that ordinary meteors appear—1, in every climate; 2, at every season of the year; 3, at every period of the day; 4, they appear for the most part when the sky is serene; 5, comets are never visible when the sky is cloudy, but meteors being sometimes below the cloud region are visible; 6, they proceed from, as well as towards, all points of the compass; 7, many of them in their course throw up sparks, and divide themselves into several sometimes larger, sometimes smaller, parts before they entirely disappear—not so with comets; 8, this bursting into pieces is generally accompanied with a rumbling noise, like thunder or a sudden report; 9, several after bursting seem to dissolve into smoke. The motion of comets is not sensibly apparent, nor do we ever witness their exploding or vanishing into smoke. Such are the leading characteristics of meteors proper. Of the periodical shooting stars I shall treat in another communication, when I hope to be able to show that their recess or orbit are not identical with those of comets, and that they do not owe their presence in them to the aid of cometic agency."

BRITISH MINES.

CUDDRA. F. Puckey, A Cundy, Oct. 9. In cross-cutting tholode at the 14 fathom level, west of Walker's shaft, we have not yet reached the tin part of the lode, still being in the south capel, which is very wet, hard, and spare for progress. In the 130, west of the same shaft, we are still driving in the killias on the side of the lode. In cutting out the lode behind the end in the 130 the tin part of the lode is 6 ft. wide, and from 12 to 14 ft. wide in the top of the shaft of the lode. The lode is still 12 ft. wide, but not producing tin. The same has been so reported on now worth 20l. per fathom for that width. We commenced the sinking of a winze below the 130 through a good lode for the

EAST WHEEL RUSSELL.—W. Richards, Oct. 3: We have cut through the lode in the 130 cross-cut, the ground north of which is a good looking quartz; we shall push on to the gold-bearing lode. The lode is 10 ft. wide, and is a new lode in the 140, east of Homersham's shaft, is 1 ft. wide, containing quartz, pyrite, mundle, and good stones of yellow copper ore. The ground in the cross-cut south in the 140 is favourable for progress. The lode in the 150 is in the back of the 140 is worth 6 ft. per fathom respectively. The ground in the 130 cross-cut, east of the slide, is even, and it is strongly mineralised with mundle and good quality copper ore. I have put two men to drive the 130 east of the north lode, west of the slide; the lode here is 3 ft. wide, containing quartz, pyrite, and good stones of yellow copper ore. This lode is a good one for an improvement and an advance towards the slide. The ground in the 140 is a little easier for progress. We have not yet cut through the even in the

NEW TRELEIGH.—Fr. Pryor, Oct. 8: We are getting on as well as possible with the preparatory work for drawing the water at Nicholson's shaft. We have fixed the ladders and made complete the footway shaft to the adit. The water is down about 3 fms. below the 10. The rods and pitwork are on the spot. We shall at once erect a horse-whim, and are under the impression that we can draw the water by barrels; in the meantime, get everything in readiness to work by the pump. I hope this will be completed in a few weeks from this time; in fact, it will be finished in a few days. I have written you part of the mine's history.

Projected New Companies.

Company.	Capital.	Shares.	Each.
Steeple Aston Iron Ore Company	£ 3,000	300	10
Phoenix Iron and Colliery Works	100,000	10,000	10
Mortgage Assurance Corporation	500,000	5,000	100
Puerto Cabello and Central Venezuela Railway	250,000	25,000	10
United Kingdom and Continental Marine Insurance Corporation	100,000	10,000	10
Hale Bank Foundry	12,000	120	100
Colignets Concrete	50,000	25,000	2

MORTGAGE ASSURANCE CORPORATION.—The objects are the purchasing, or otherwise acquiring, and the selling, or otherwise disposing of, and the clearing in Government, public, and other loans, stocks, funds, shares, bonds, debentures, and other securities, whether British or foreign, and the guaranteeing, or otherwise securing, the payment of money under, or in pursuance of any British or foreign bonds, debentures, mortgages, shares, contracts, or securities, and the purchasing, or otherwise acquiring, land, estates, houses, or buildings, or property in Great Britain, or in Ireland, or abroad, and the mortgaging, selling, letting, holding, carrying on, or otherwise dealing with, or disposing thereof; and the granting of bonds, debentures, or other securities, as principals, or sureties for payment of money, or performance of contracts; and the granting, securing, effecting, purchasing, or otherwise dealing in life and term policies (except fire, marine, or accidental policies), whether absolute, contingent, or reversionary annuities and endowments; and the receiving of money on deposit for definite period, or upon call, with agreed terms of notice, and the purchasing, or otherwise acquiring, and the selling, or otherwise letting, or otherwise dealing with or disposing of any concession, or grant; and the making of advances in money, shares, or securities, or either of them, and the amalgamating with, sale to, or the purchase, or accretion of, of the property and undertaking of any other company or companies already established, or which may be hereafter established for the like objects, or any one or more of them, or any part or parts thereof; and the doing all such other acts, deeds, and things as shall be necessary or expedient to carry into effect all or any of the objects herebefore stated or indicated, or any, or either of them. The capital of the company is 500,000l., or 5000 shares of 100l. each. First directors the following subscribers to the Memorandum and Articles of Association: J. GEORGE PARKER, gentleman, 63, Queen-street, Cheapside, London, 1; JOHN GEORGE PARKER, gentleman, Leckhampton Villa, Tulse Hill, Surrey, 1; HENRY HUBERT VINGOE, gentleman, Penzance, Cornwall, 1; CHRISTOPHER HALL, merchant, Langbourne Chambers, Fenchurch-street, E.C., 1; JAMES BURBRIDGE, 21, Queen Margaret's-grove, Mildmay Park, London, gentleman, 1; EUSTACE BRAINERD LEAVITT, 20, Milner-square, London, gentleman, 1; FRANCIS CHAS. THORNTON, 114, Shoe-lane, Fleet-street, London, gentleman, 1; The directors shall be entitled as a remuneration for their services to a minimum sum of 5000l. per annum, and such further sum or sums as the members in general or extraordinary general meeting from time to time determine.

UNITED KINGDOM AND CONTINENTAL MARINE INSURANCE CORPORATION.—The objects for which this company is established are the general business of marine insurance upon vessels, freights, and cargoes in the United Kingdom and elsewhere, and the doing of all such other things as are incidental or conducive to the attainment of the above objects. The capital of the company shall consist of 100,000l., divided into 10,000 fully paid-up shares, represented by share-warrants to bearer of 10l. each. Every member of the company undertakes to contribute to the assets of the company in the event of the same being wound-up during the time that he is a member, or within one year afterwards, for payment of the debts and liabilities of the company, contracted before the time at which he ceases to be a member, and the costs, charges, and expenses of winding-up the same, and for the adjustment of the rights of the contributors among themselves, such amount as may be required, not exceeding 200l. The directors shall be elected annually by the company in general meeting. The number of directors, and the names of the first directors, shall be determined by the subscribers to the Memorandum of Association. Until the directors are appointed, the following subscribers to the Memorandum of Association shall, for all the powers of this Act, be deemed to be directors:—CHARLES A. WEBSTER, WEDDERBURN, 25, South-street, Park-lane, London, gentleman; JAMES RADCLIFFE, 7, Park-road, Bromley, Kent, gentleman; JAMES CARTWRIGHT, 4, New Basinghall-street, London, engineer and contractor; J. J. PEDDELL, 3, Basinghall-street, London, solicitor; ERNEST ETIENNE, 72, Rue Croissant, Paris, merchant; CLAIR DE LA CHERRARDIERE, 13, Rue de Chartres, Neuilly, Paris, gentleman; JOSEPH JOHN ARNOLD, 13, Rue Joubert, Paris, gentleman.

PHENIX IRON AND COLLIERIES WORKS.—The objects for which this company is established are the purchasing, or taking on lease, or in fee, or otherwise acquiring, certain ironworks situated at Seend, in the county of Wilts, and also the Baglan Hall Colliery, situated at Brittonferry, in the county of Glamorgan; and also the Glyn-a-Bont Colliery, situated at Glyn Neath, in the county of Glamorgan, or any or either of them; and also the lands, buildings, mines, works, quarries, pits, minerals, clays, and earths now, or usually, held therewith, or belonging thereto, respectively, together with all, or any parts of the engines, machinery, plant, stock-in-trade, and conveniences lately, or now, used in working the same, respectively, or any or either of them. The purchasing, or taking on lease, or otherwise acquiring, all such other land, mines, quarries, pits, minerals, clays, and earths as may be considered expedient for the purposes of the company. The working of, and the erection and purchasing of, all such furnaces, engines, machinery, and plant as may be necessary for the working of the hereinbefore-mentioned ironworks and collieries, and the opening and working of the mines, quarries, pits, &c.; and the sale of the manufactures and products of the iron castings, and of iron and steel; and the rendering merchantable and selling of iron ores, metals, minerals, &c., and generally for carrying on the trade, or business, of ironmasters, and manufacturers of, and dealers in, iron and steel; and the raising and rendering merchantable, and selling, coal and coke, and generally carrying on the business of coal and coke merchants, and dealers therein. The Memorandum is signed by—EUSTACE BRAINERD LEAVITT, 20, Milner-square, London, gentleman, 1; JAMES BURBRIDGE, 21, Queen Margaret's-grove, London, gentleman, 1; WILLIAM RICHARD, Crosby Hall Chambers, London, E.C., merchant, 1; WM. ALFRED COX, 163, Barnsbury-road, Islington, Middlesex, law stationer, 1; JOHN BAPTIST A. WOLPERT, 3, Birch-lane, Cornhill, London, advertising agent, 1; HENRY J. PELLEW, 2, New Bridge-street, Vauxhall, Surrey, cork bed manufacturer, 1. The first directors to be chosen by a majority of the subscribers to the Memorandum of Association. Qualification, 10 shares. Remuneration 200l. per annum, and when a dividend of 10l. per cent. per annum shall be declared on the paid-up capital of the company it shall be increased to 300l. per annum, and the further sum of 100l. for every additional 10l. per cent. dividend thereafter paid.

COIGNET'S CONCRETE COMPANY, 50,000l., in 25,000 shares, of 2l. each, with power to increase.—The objects for which the company is established are the carrying on the trade or business of concrete manufacturers, and contractors for works in concrete. The acquiring from the Société Centrale de Béton Aggloméré (systeme Coignet) of Paris, all patents now existing or to be taken out hereafter, for Great Britain and Ireland and the British Colonies, except India, relative to their concrete, or the machinery or apparatus employed in the manufacture or application thereof, &c. The transaction and doing of all such other things as are incidental or conducive to the attainment of the above objects. The subscribers to the memorandum are H. SCOBELL PERRING, 2, Mary's Cottages, Bath-road, Osborne-road, Hounslow, gentleman, 1; THOS. GLADWIS, 16, Water-lane, Tower-street, London, hop merchant, 1; WM. H. GRAY, St. Austell, Cornwall, engineer, 1; MURRAY, 7, Coventry, London, 1; HENRY SURREY, potter, 1; BOB ALFRED COX, 163, Barnsbury-road, Islington, Middlesex, law stationer, 1; JOHN BAPTIST A. WOLPERT, 3, Birch-lane, Cornhill, London, advertising agent, 1; HENRY J. PELLEW, 2, New Bridge-street, Vauxhall, Surrey, cork bed manufacturer, 1. The first directors to be chosen by a majority of the subscribers to the Memorandum of Association. Qualification, 10 shares. Remuneration 200l. per annum, and when a dividend of 10l. per cent. per annum shall be declared on the paid-up capital of the company it shall be increased to 300l. per annum, and the further sum of 100l. for every additional 10l. per cent. dividend thereafter paid.

HALE BANK FOUNDRY.—The objects for which the company is established are the carrying on the business of ironfounding and engineering to all its branches, and the doing all such things as are incidental or conducive to the same. The nominal capital is 120,000l., in 120 shares of 1000l. each, with power to increase. Number of directors, three. The memorandum is signed by—DAVID GAMBLE, Windlehurst, St. Helen's, Lancashire, manufacturing chemist, 30; SAMUEL STOCK, Blackley Hurst, Billinge, Lancashire, coal proprietor, 30; WM. THORNTON, 4, Oak Bank-terrace, Whitehaven, Cumberland, ironmaster, 2; JAS. HADDOCK, Windle Cottage, St. Helen's, Lancashire, coal proprietor, 2; ANDREW SHIRRAW, Ditton, near Warrington, Lancashire, engineer, 40; JOHN THORNTON, Mersey View, Halewood, near Warrington, Lancashire, ironmaster, 5; EDWARD PREPOT, 18, Chapel-street, Liverpool, coal agent, 6. The three first directors subscribers to Memorandum of Association.

DIAMONDS IN BRAZIL.—In Goyaz a new diamond tract has been discovered, 65 miles from Catalao, in the district of Santo Antonio de Rio Verde. Several first-class stones have been picked up, some of them 55 grains in weight. Diamond washers were flocking to the spot; 500 were already there, and the number was continuously on the increase.

With this week's Journal we give a SUPPLEMENTAL SHEET, containing the report on the Apparatus and Processes of the Art of Mining and of Metallurgy shown at the Paris International Exhibition, prepared by order of the Committee of Council on Education, by Prof. Warrington Smyth, M.A., F.R.S.; Foreign Mining and Metallurgy; Reports on Foreign Mines—Alamillos, Linares, Fortuna, and Pontgibaud; Ice in Deep Mines, &c.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, OCTOBER 11, 1867.			
COPPER.	£ s. d.	IRON.	Per ton.
Best selected, p. ton	84 0 0	Bars Welsh, in London	6 10 0
Tough cake and tile	79 0 0	Ditto, to arrive	6 10 0
Sheathing & sheets	81 0 0	Nail rods	7 0 0
Boils	83 0 0	Staff, in London	7 10 0
Bottoms	85 0 0	Bars ditto	7 10 0
Old (Exchange)	73 0 0	Hoops ditto	8 10 0
Burra Burra	85 0 0	Sheets, single	9 5 0
Wire	0 10 0	Pig No. 1, in Wales	8 15 0
Tubes	0 11 1/2	Refined metal, ditto	4 0 0
		Bars, common ditto	5 15 0
		Do. mch. Tyneor Tees	6 10 0
		Do. railway, in Wales	10 0 0
		Do. Swed. in London	10 0 0
		To arrive	10 0 0
		Pig, No. 1, in Clyde	2 14 3
		Do. f.o.b. Tyneor Tees	2 6 0
		Do. Nos. 2, 4, f.o.b. do.	2 0 0
		Railway chairs	5 10 0
		spikes	11 0 0
		Indian Charcoal Pigs,	7 0 0
		in London p. ton.	7 0 0
		STEEL.	Per ton.
		Swed., in kegs (rolled)	14 5 0
		Do., (hammered)	15 10 0
		Ditto, in faggots	16 0 0
		English, spring	17 0 0
		QUICKSILVER (p. bottle)	6 17 0
		LEAD.	Per ton.
		English Pig, common	19 12 6
		Ditto, L.B.	20 0 0
		Ditto, W.B.	21 15 0
		Ditto, ordinary soft	20 0 0
		Ditto, sheet	20 10 0
		Ditto, red lead	20 15 0
		Ditto, white	27 0 0
		Ditto, patent shot	23 0 0
		Spanish	19 5 0

* At the works, 1s. to 1s. 6d. per box less.

† A Derbyshire quotation: not generally known in the London market.

REMARKS.—Very little alteration has taken place in the Metal Market during the past week, still it is certainly not in a worse position than it was, and, if anything, may be said to be rather better. It is only by gradual steps that we can expect to have a general revival in the metal trade, as the depression has now been of such long continuance, and buyers seem to have imbibed a more than usual amount of caution in entering into operations, and still appear to hesitate before giving out their orders. These feelings, however, may anticipate will be removed by degrees, and then we shall find that orders are given out with former confidence. Fortunately, there now seems not much fear that, for the present at least, war will break out on the Continent, as the Emperor Napoleon seems determined to carry out his celebrated assertion that "The Empire is Peace," and it is to be hoped that he will continue to adhere to this statement, and that nothing will occur to disturb the present peaceful state of the European nations. This reiteration of a peaceful policy on the part of the French Emperor is calculated to allay the fears which were entertained of a contrary character, and will, in some measure, tend to produce a better feeling in commercial affairs, as everything that is likely to produce an improvement in business generally will be received with satisfaction. There is certainly an improvement in the orders for metals from America, which is gratifying, as in ordinary conditions of the trade a very large quantity of metals are shipped to the United States, and some portions of the metal trade are particularly affected by the extent of the orders from thence, consequently any improvement in them is most welcome.

COPPER.—Business generally has not been very active in this metal during the week, but latterly there seems to be a little better feeling springing up, and prices are rather firmer than they were, especially for Chili bars, in which business has been done in Liverpool at 69l. 10s.

IRON.—The last of the Quarterly Meetings of the South Staffordshire Ironmasters was held at Wolverhampton, on Wednesday. The attendance was very small, and scarcely any business was transacted, and altogether the present were the quietest quarterly meetings ever experienced. The fact is, everybody seems disposed to abstain as much as possible from entering into engagements; and the more makers press sales the less disposed the buyers are to operate; and, in such circumstances, nothing is to be done but to wait patiently until business comes round in a natural way. There is a large specification for finished iron out through Government, which is believed to be on account of a foreign country; it is chiefly for bar and angle-iron, but it is not very probable that it will come to South Staffordshire. In Welsh, at the various works in the district it cannot be said that the trade has improved to the extent which the feeling that set in some weeks since led many to anticipate, but the depression has continued so long, and been so severe, that anything like a restoration to its previous activity cannot be expected at once. On American account there is a considerable quantity of iron being shipped, and if present anticipations are realised shipments to the United States will continue to increase for some time to come, and the same may be said respecting the British American possessions. In Swedish iron there is not much doing at present; several parcels are expected to arrive shortly, and prices remain as last quoted. In Scotch pig-iron a good business has been done, and prices have rather advanced, the last price received from Glasgow being 54s. 7d. cash.

LEAD.—A moderate business continues to be done, and prices are tolerably firm at the quotations.

TIN.—The market for Straits has been flat during the week, partly in consequence of lower prices being quoted for Banca in Holland, which has caused the price of Straits to decline here, and business to a limited extent has been done at 89l. cash. English is also dull, and transactions have occurred a little under official rates.

SPELTER has remained rather inactive, and only a limited amount of business has been done; the price on the spot, however, still remains firm at 21l. 10s. The stock in London on Sept. 30 was 3681 tons, being a decrease of 82 tons during the month.

TIN-PLATES.—Stocks in the hands of manufacturers are very low; the orders on the books, however, are good, and the works generally well employed.

STEEL and QUICKSILVER not much doing.

BIRMINGHAM, OCT. 11.—Rylands' "Iron Trade Circular" says:—The quarter-day's result is that pigs are from 1-16th to 1-8th better for marked brands. Scotch were steady; Cleveland improving; manufactured iron weaker. Although stocks are low, orders, taken altogether, are better than on last quarter-day.

LIVERPOOL, OCT. 10.—Messrs. Knowles, Gorst, and Riso write:—Copper: Attracted by the low prices, French and English smelters have entered into large contracts for Chili bars, ingots, and regulus during the past week, at prices ranging from 68l. to 69l. for bars, and 14s. to 14s. 3d. for regulus: market closes better, 70l. being now generally asked for good bars. Tin has gone quiet since the Dutch sale, and prices have given way for Banca, Straits, and English from 14l. to 22l. per ton.

MIDDLESBOROUGH, OCT. 10.—The "Iron Trade Review" states:—The iron trade of the Cleveland district continues rather better in tone, and prices are decidedly firmer for next year's deliveries. Stocks have gone down about 10,000 tons during the month of September. Manufactured iron continues in much the same condition as last reported. Rail-mills more fully occupied than any other class of works.

COAL MARKET.—The fresh arrivals this week only number 97 ships. Household coals have been in active demand, and in some instances 3d. to 6d. per ton dearer. Hartley coals have also met with some enquiry, and quote a rise in prices of 6d. Hetton Wallsend, 22s.;

Original Hartlepool Wallsend, 22s.; Braddyll's Wallsend, 21s.; New Belmont Wallsend, 20s.; Kelloe Wallsend, 20s.; South Hartlepool, 20s.; Hetton Lyons Wallsend, 19s. 9d.; Tunstall Wallsend, 19s. 9d.; West Hartley, 18s. 6d. Unsold, 3 cargoes; at sea, 10 ships.

The MINING SHARE MARKET has been very dull this week, both in regard to the prices of shares generally and in the amount of business transacted, though a better tone pervaded it after it became known, on Thursday, that the standard for copper ore had risen 17. per ton. The shares mostly dealt in have been Prince of Wales, East Cadafon, Marke Valley, Great Wheal Vor, Great Laxey, Chontales, Wheal Buller, Grenville, Chiverton Moor, North Treskerby, West Chiverton, Wheal Bassett, South Frances, and a few others. Prince of Wales, 52s. 6d. to 55s.; the 55 east has commenced driving, worth 18l. per fm. The 55 west, driving on the cross-course, is worth 10l. per fathom. Other parts are the same as last week. Wheal Grenville shares advanced to 34s., and leave off 29s. to 31s.; the agent is now satisfied that the lode cut below the 120 is the counter copper lode, and when down to the 130 (in 2 fathoms more) driving will be commenced upon it. The tin lode is worth from 70l. to 80l. per fm., and set to drive at 4s. in 17. East Cadafon shares have advanced to 6, 6 1/2; at the meeting, held at Salisbury, no dividend was declared. The profit on the quarter was 461l. 18s. 11d., and the balance in hand 2908l. 12s. 3d. Three important points will come off in the mine within a few months, and upon which its future prosperity will depend—1. In about a month it is expected to cut the junction of the caunter and south lodes in the 115, and the indications, we understand, are such as to lead to the expectation of very favourable results.—2. The cross-cut north in the 50, which has been driven for some years, is expected to cut two or three lodes; and, 3. Secombe's lode will be met with in the 60 in about a month. Marke Valley, 6 to 6 1/2; at the meeting the accounts showed a profit on the quarter of 1894l. 10s. 8d., and a dividend of 4s. per share (1800l.) was declared; and, after paying 5000l. also towards the new leases, the balance left in hand was 2076l. 13s. 9d. The mine is looking well, and the various stopes and pitches continue to produce their usual quantities of ore. Great Retallack, 3 1/2 to 4. The mine will sample 20 tons of good lead on Wednesday next. Chiverton Moor, 5 1/2 to 5 1/2; Chontales Gold, 4 1/2 to 4 1/2; Clifford Amalgamated, 7 1/2 to 7 1/2.

North Treskerby, 32s. to 34s.; at the meeting held on Tuesday the accounts showed a loss on four months' working of 511l. 5s. 7d., and a balance in favour of the mine of 274l. 12s. 5d. The report states that within two months the prospects have greatly improved, and, judging from the character of the lode in different levels, the agents expect a greater improvement ere long. Devon Great Consols are in good request at 420 to 430; Drake Walls, 12s. to 14s.; East Bassett, 12 1/2 to 15. Carn Camborne, 15s. to 20s.; at the meeting the accounts showed a balance in favour of the mine of 179l. 13s. 10d.; a call of 1s. per share was made. The agents hope when the lode has been opened upon at the 70 it will be found to be more compact and productive. The ores sold during the quarter realised 155l. 15s. 8d. East Carn Brea, 2 1/2 to 2 1/2; East Lovell, 8 to 8 1/2; East Wheal Russell, 1 1/2 to 1 1/2; East Wheal Grenville, 2 to 2 1/2; Great Laxey, 17 1/2 to 18 1/2. Wheal Buller, 23 to 26. At Kistler's shaft, from which so much has been expected, the 100 fm. level will be cleared, east and west, this week, and the agents will be able to report more fully upon it. The stope under the 80 is worth 30l. per fathom. Great Wheal Vor, 17 to 18; North Crofty, 3 1/2 to 4 1/2; Providence Mines, 28l. to 29l.; South Frances, 36 to 38; Tincroft, 12 to 13; West Chiverton, 64 to 65; Wheal Bassett, 80 to 85; Wheal Chiverton, 6 1/2 to 6 1/2; Wheal Mary Ann, 16 1/2 to 17 1/2; Wheal Seton, 105 to 110.

The Market for Mine Shares on the Stock Exchange during the week has been active. East Cadafon shares, on Monday, were offered as low as 5 1/2; but on purchases and on it becoming known that the ground is much more favourable in appearance for copper, where the lode will shortly be seen 15 fathoms deeper than hitherto worked, shares rose on Wednesday to 6 1/2, 6 1/2, and a large business was done. Marke Valley shares have also risen, and command a ready market. The mine is looking very well. West Chiverton continues to improve in the bottom levels, and from the permanence for dividends established by large reserves the investing public continue to absorb shares. Great Laxey shares are firm at 18 to 18 1/2. The lode in the 190 north is 12 feet wide, composed of lead and blende; this part of the mine is opening up extremely rich, and the prospects for permanence are very good. Chiverton and Chiverton Moor shares are steady, and the prospects are unchanged. North Crofty Mine is very promising, and shares have been dealt in to some extent. Gold mines command a fair amount of attention. Don Pedro shares have risen, and are in favour. Del Rey shares are rather flatter. Chontales, fully paid up, have been dealt in at about par to 1/2 prem. Royalty shares, 3l. to 4l. (5l. paid); ordinary shares less firm. The advances by the next mail are anxiously looked for. Several of the Brazilian mines—Anglo-Brazilian, Rossa Grande, &c.—are fractionally higher. Westminster Lead (Limited) is looking well in the bottom levels both east and west, and in the shaft is improving.

The FREMATOR GRANITE QUARRIES COMPANY, with a capital of 30,000l., in shares of 5l. each, has been formed for purchasing the lease, 33 years unexpired, granted by the Duke of Bedford, of the quarries of the same name, situated near the village of Gunnedale, about 3 1/2 miles from Tavistock, and 26 miles from Plymouth. The quarries have been examined and favourably reported upon by Messrs. D. K. Clark and T. Whitaker. The quarries are well supplied with proper buildings and materials, which are in good repair. The texture of the granite is a fine grit, free from the large horse-tooth spar so often found; it resembles the Haytor granite, is of a clear blue colour, is lighter than the Aberdeen granite, and considerably harder, and will bear a greater pressure than the granite which is obtained from the quarries near Prince Town, Dartmoor, or from the quarries further west, in the county of Cornwall. The strata, or bed of the rock, being well defined, it will be found to cleave, or split, better, and is more easily converted into kerb or pitching, and the smaller sizes required for street paving; thus working up beneficially the small stuff, which is often useless, from the difficulty and cost of working. The purchase-money has been fixed at 13,000l. for the grant and goodwill, together with the entire fixed and movable plant; the payment is to be made, 11,000l. in cash and 2000l. in paid-up shares. The minimum rent is 100l. per annum, merging into a royalty of 6d. per ton for large blocks; 4d. for small; and 2d. for pitching. The granite has been largely used, and a profit of 15 per cent. is anticipated. It is proposed 20 per cent. of any profits that may be realised is to form a reserve fund for extensions and improvements.

At Redruth Ticking, on Thursday, 1737 tons of ore were sold, realising 7497l. 18s. 6d. The particulars of the sale were:—Average standard, 111l. 19s.; average produce, 6 1/2; average price per ton, 47. 6s. 0d.; quantity of fine copper, 109 tons 13 cwt. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Sept. 12	1294	111 19 0	5 1/2	43 18 6	13s. 9d.	268 15 0
" 19	4000	117 19 0	6 1/2	4 9 0	14 6 1/2	72 16 0
" 26	2980	114 7 0	6 1/2	6 2 0	14 4 1/2	71 18 0
Oct. 3	3200	110 3 0	6 1/2	4 7 0	13 6	67 8 0
" 10	1737	111 19 0	6 1/2	4 6 0	13 8	68 6 0

Compared with last week's sale, the advance has been in the standard 17, and in the price per ton of ore about 1s. 4d. Compared with the corresponding sale of last month, the decline has been in the standard 16s., and in the price per ton of ore about 9d.

At Creegbrawse and Penkevill United Mines meeting, on October 4, the accounts showed a credit balance of 585l. 2s., the profit on the six months' operations amounting to 593l. 2s. 3d. A dividend of 509l. (1l. per share) was declared, leaving a balance of 76l. 2s. to be carried forward to the credit of the next account. The report of the agents stated that, notwithstanding their reports since the meeting have been considered sanguine, it would be seen, from the accounts produced to-day, as well as from the returns, that they have been fully borne out, not by diminishing the network operations, but by increasing them; as a proof of which they had 86 persons on network and only 19 on tribute; and, although they have sold the tin as per accounts submitted, they have over 15 tons on the mine broken.

At Marke Valley Mine meeting, on Wednesday (Mr. B. Warburton in the chair), the accounts for the three months to date showed a credit balance of 2461l. 16s. 5d., and a profit on the three months' working of 1894l. 10s. 8d. A dividend of 1800l. (4s. per share) was declared. The salary of Captain Truett

was raised from 67. 6s. to 81. 8s. per month, and that of Mr. Thorne from 67. 6s. to 71. 7s., and thanks were voted to them. Captain John Truscott reported that the various stopes and pitches continue to produce their usual quantities of ore. The appearance of the mine are of a very gratifying character.

At Carn Brea Mines annual meeting, the accounts showed a loss on the workings to end of December, 1866, of 5957. 15s. 3d. The amount credited for copper ore raised in that period is 6552. 7s. 9d., and for tin ores 18,407. 8s. 9d.; arsenic, 1471. 2s. 6d., against the returns to the end of 1865, 31,865. 10s. 6d., showing a decrease of 6469. The average price of tin for that year was 54s. 1s. 8d.; of copper 186s. 4s. 7d., or a difference of 17. 7s. 1d. less per ton. The dividends paid to the shareholders in these mines since the formation of the present company in 1832 to the year 1864 amount to 273,500. The original outlay previous to getting into a dividend position was 15,000. The plant is valued at the present time at (the depressed value being considered) 40,000. The cost of the same must have been close upon 100,000. The highest dividend was paid in 1847 (20,000.), and the lowest in 1866 (2000.).

At East Rosewarne Mine meeting, on Friday (Mr. W. Ogilvie in the chair), the accounts for the four months ending July showed a debit balance, when the 1871. 16s. arrears of call is paid, of 1571. 1s. 9d. A call of 2s. per share was made. Capt. C. Glasson reported that their engines and pitwork are all in good working condition—water about 4½ strokes per minute.

At South Corndurow Mine meeting (Mr. J. A. Buckland in the chair), the accounts for the four months ending June showed a credit balance, when the 4061. 12s. 3d. arrears of call are paid, of 961. 19s. 6d. A call of 3s. per share was made. Capt. Joseph Vivian and Sons and W. Williams reported upon the various points of operation.

At Cape Cornwall Mine meeting, on Thursday (Mr. H. L. Phillips, managing director, in the chair), the accounts showed a balance of assets over liabilities of 4080. 15s. 11d. Details in another column.

At Penhale Wheal Vor meeting, on Wednesday (Mr. T. Holroyd in the chair), the accounts showed a debit balance of 1380. A call of 10s. per share was made, payable in two instalments. Details in another column.

At Levant Mine meeting, on Tuesday, the accounts showed a profit in the three months' operations of 120. The credit balance amounted to 2717., including 47 tons of tin (244s.), and copper 2621. A credit balance of 2391. was carried forward.

At the West Rose Down Mine meeting, on Wednesday (Mr. R. W. Childs in the chair), the accounts showed a credit balance of 461. 3s. 7d. A call of 10s. per share was made. Capt. John Truscott reported that the prospects of the mine are encouraging as it becomes further developed.

At Carn Camborne Mine meeting, on Wednesday (Mr. W. Fawcett in the chair), the accounts for the three months to date showed a debit balance of 461. 19s. 7d., and a balance of assets over liabilities of 1791. 13s. 10d. A call of 1s. per share was made. Capt. John Truscott reported upon the various points of operation.

At the Tin Hill Mine meeting, on Thursday, the accounts showed a debit balance of 4171. 3s. 8d. A call of 4s. per share on 2913 shares was made, and the report on the mine considered very satisfactory.

At North Levant Mine meeting, on October 5, the accounts showed a debit balance of 3511. 11s. 11d. The report of Capt. J. Nancarrow stated that the time did not seem far distant when this property will become more valuable to the shareholders. The agents' report stated that judging from the appearance of the lodes, and their geological position, they could not but think that they will eventually have a good mine. They calculate their returns of tin for the next six months will be about sufficient to pay the costs of the mine.

At Nanglies Mine meeting, on October 1, the accounts showed a debit balance of 8721. 2s. 8d. A call of 17s. per share was made. Lord Falmouth having kindly consented to give up his dues from August 1, it was resolved that the thanks of the adventurers be accorded to his lordship. The agents' report stated that the stopes in back of the 120 were nearly exhausted, but they think in a first-class speculation to explore certain lodes by means of cross-cuts. It was hoped the first would be in six months.

At South Wheal Seton meeting, on October 3, the accounts showed a debit balance of 9151. 12s. 10d. A call of 21. 10s. per share was made. The agents' report stated that they expected to cut the south lode in about three months; they are pleased to find a little copper ore in the branch recently passed through, as a favourable indication for productiveness of the south lode when opened on. They still had to advise the sinking of the engine-shaft with all possible speed, as likely to be most effective in proving the value of the mine.

At North Treskerby Mine meeting, on Tuesday, the accounts showed a loss on the four months' working of 5111. 5s. 7d., reducing the balance in favour of the mine from 7851. 18s. to 2741. 12s. 5d.—The ore sold on Sept. 26, to come to the credit of the next account, amounts to 17411. 12s. 10d.

On the Stock Exchange, a moderate amount of business has been transacted in Mining Shares during the week. The following prices were officially recorded in British Mining Shares:—Devon Great Consols, 430, 428½; East Caradon, 5½, 5½, 6, 6½; Great Wheal Vor, 17½, 18; Marke Valley, 6½, 6; North Wheal Crofty, 4½; Great Laxey, 1½; West Basset, 1; Prince of Wales, 2 11½; Providence, 29. In Colonial Mining Shares the prices were—Port Phillip, 1 5-16, 1½; Cape Copper, 6½, 6½, 6½; Scottish Australian, 1 1-16, 1½. In Foreign Mining Shares the prices were—Alamillos, 15-16; Chontales, 4½, 4-16, 4½; Don Pedro, 24, 24, 2 5-16, 2½ prem.; St. John del Rey, 30, 30½, 58½; Panulicillo, 2½; Anglo-Brazilian, 9-16, 1; Pestarena, 10 to 2½; Rossa Grande, 7-16 to 9-16.

The Bank of England Return for the week ending on Wednesday showed in the ISSUED DEPARTMENT a decrease in the "notes issued" of 507,555., which is represented by a corresponding decrease in the coin and bullion on the other side of the account. In the BANKING DEPARTMENT there is shown a decrease on the "other deposits" of 127,019., and in the "seven day and other" of 20,458., together 157,477.; and an increase in the "public deposits" of 19,947., and in the "rest" of 3880., together 33,827.—123,650.; and deducting from this 88,549., the decrease in the "other securities" on the asset side, remains a decrease in the total reserve of 35,101.

A petition for winding-up the New Mansfield Copper and Silver Mining Company (Limited) is to be heard before Vice-Chancellor Malins, at the Adelphi Hotel, Godalming, on Wednesday.

Creditors of the Continental Gas and Water Company (Limited) are required to send the particulars of their claims to Mr. E. P. Rowsell, of Roseburgh-street, the liquidator, by the 20th instant.

Creditors of Gale's Protected Gunpowder Company (Limited) are required to send the particulars of their claims to Mr. C. F. Kemp and Mr. H. P. Peters, the liquidators, by the 31st instant.

GOLD MINING IN ITALY.—The directors of the Pestarena United Mining Company have received the following telegram:—"Palermo, Oct. 9: Remittance of gold to office, 1047 ozs." This remittance has been obtained from amalgam produced since Aug. 27. Its value may be estimated at something like 3500., while the monthly output are about 1700. to 1800. By the report (which appears in another column) it will be seen that the development of these mines is progressing most satisfactorily, and as soon as the improved means for the carriage of the ore shall have been completed, which will be the case, it is expected the monthly expenditure will be diminished, and the returns increased.

ROSEWARNE CONSOLS.—An important discovery in this mine is reported. The lode in the 80, which was worth 41. per fm. last week, now worth 20., and improving. This is the important point referred to in Capt. James Pope's special report of March 18.

THE MINERS' ASSOCIATION OF DEVON AND CORNWALL.—The Association for Devon and Cornwall is about to extend its operations by giving classes for instruction in chemistry and mineralogy at Camborne, Breage &c. The mineralogical course will include complete instruction in the method of determining minerals by the aid of the blow-pipe and various easy tests, each subject about 20 lectures will be delivered. On Wednesday evening Mr. Robert Hunt, F.R.S., will distribute the prizes gained by the members of the class of the association at the late examination at the Science and Art Department, and will on that occasion deliver an address on the Advancement of Education in Science, as leading to improvement in the working of the general advancement of mining in Cornwall.

MEETING OF ENGINEERS.—At the meeting of members on Monday (Mr. H. Le Feuvre, President), a paper was read by Mr. Ewing Matheson on the quality of Iron as now used. A discussion took place on Mr. Vanhanen's paper on Water Tube Boilers (read on May 6.). Mr. William James and Mr. Charles Jones, were duly elected as members. The names of candidates for election at the next ballot were announced.

THE COPPER TRADE.—Messrs. Vivian, Younger, and Bond (Oct. 11) The large business in Chili bars reported in our last has not been followed by further purchases at the advanced price of 701. per ton now asked for; indeed, the only sale we have to report in this description is about 1000. at 691. per ton. In Urmeneta ingots, however, about 300 tons changed hands at 721. 10s., and 10 tons at 761. per ton. Manufactured copper, India pattern, has been sold in quantity at from 781. to 791.; the price now asked for, but this cannot be procured. Altogether the market is very quiet, with apparently any strong tendency either way. Tough copper is reported as 741. to 751. per ton to a small extent, but the business generally in English copper and Australian sorts is almost nil.

WORKING IN COAL MINES.—James Crook and Joseph Cook were at Bolton, with smoking in one of the mines of the Hulton collieries, both men confessed their guilt, but having good characters, they got off with nominal penalty of 5s. costs and a reprimand.

THE OAKS COLLIERY.—On Wednesday an important change was made in connection with the re-opening of the mine. At the last meeting of the general committee asked Mr. Dymond, the managing partner, to resign of their duties, and place entire responsibility in the hands of one person. That committee have now terminated their labours, and the entire management of re-opening the mine has been placed in the hands of three of the most famous some years ago by the manufacture of the Atlantic cable. The management of the proceeds will be henceforth under the control of the gentlemen. The men resumed work on Tuesday morning, being driven from the previous day by the gas. The box-hole has been entirely cleared

out, without finding any more bodies; and a stopping have been fixed in the doorway, the wall of the box-hole having been broken through by some means and thus communicating with a back roadway, and consequently leading into the workings. The men are now sending spoil out from between Nos. 1 and 2 shafts.

BESSEMER STEEL.—An objection made against Bessemer steel is that the ingots on cooling are full of blow-holes. To obviate this, moulds are now used which rotate slowly on their axis after the metal is run in. The effect of the movement is to favour the escape of gas at the centre of the mass, which retains the molten condition longest, and to produce complete consolidation. Polished sections of an ingot cast under rotation exhibit but few or none of the black specks common in other specimens, supposed to result from the air bubbles or blow-holes, as they are called in some foundries.—*Athenaeum*.

THE "GLEN OSMOND."—This fine ship, built expressly for the Adelaide trade, by Messrs. James Laing and Co., of Sunderland, is owned by Mr. W. A. Storey of Wisbeach, and commanded by Capt. H. R. Angel, late of the "Verulam." Her dimensions are as follows:—Length over all, 190 ft.; breadth, 34 ft.; depth, 19 ft.; classed 16 years A 1. The frame is of iron, covered with teak planking 5½ in. in thickness, and fastened with copper bolts. She is beautifully modelled, will carry a large spread of canvas, and is confidently expected to attain very great speed. Her saloon and cabins are fitted regardless of expense, while the comfort of passengers has been studied.—*Mark Lane Express*.

The Emperor of Russia has ordered the establishment of a commission, charged to enquire into the best means of extracting and employing anthracite coal from the rich beds in the territory of the Don Cossacks.

TO MINING AND SMELTING COMPANIES.—WANTED, by the advertiser, a SITUATION as ASSAYER of COPPER, TIN, LEAD, SILVER, GOLD, IRON, &c. Accustomed to sampling, weighing, and shipping of ores for several years, in connection with the assaying. The advertiser has all the necessary assay tools if required. References on application. Address, "L. C.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, by a MINING AGENT, just returned from abroad, a RE-ENGAGEMENT. The advertiser thoroughly understands Mining in all its branches, and can produce the highest testimonials as to character and abilities. Address preferred. Address, "A. B. A.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

TO MERCHANTS, ACCOUNTANTS, AND OTHERS. WANTED, by the ADVERTISER, a SITUATION as CLERK. Well qualified, and can be highly recommended. Salary expected moderate. Age 26 years. Apply to "Trebo," Post Office, Neath.

WANTED, an EXPERIENCED and CONFIDENTIAL CLERK accustomed to the SALE and PURCHASE of METALS. He must have a perfect knowledge of the trade in tin-plates, and be a good correspondent. Commencing salary about £300 per annum. Apply by letter, stating full particulars, to "E. N.," Messrs. Dawson and Sons, 121, Cannon-street, London, E.C.

WANTED IMMEDIATELY, in a MINING ENGINEER, LAND, and BUILDING SURVEYOR'S OFFICE, a WELL-EDUCATED YOUTH, of from 14 to 15 years old, as an ARTICLED PUPIL. Premium not so much an object as that he should soon be able to render services in the different branches of his profession. Address, "Mining Engineer," MINING JOURNAL Office, No. 26, Fleet-street, London, E.C.

WANTED IMMEDIATELY, for the WHEEL EMILY MINE, in the parish of CALLINGTON, CORNWALL, a RESIDENT AGENT, who understands all the requirements in mining. Parties applying for the same will send age and copies of testimonials of character to the manager, Capt. WILLIAMS, at No. 9, Clarence-street, Plymouth, Devon, on or before the 19th instant.—Dated Oct. 7, 1867.

WANTED IMMEDIATELY, either new or secondhand, a 60 or 70 in. cylinder PUMPING ENGINE, with adequate boiler or boilers complete, for the WHEEL EMILY MINE, situated in the parish of CALLINGTON, CORNWALL. Parties desirous of supplying the same will send their price, addressed to the manager, Capt. WILLIAMS, No. 9, Clarence-street, Plymouth, Devon.—Dated Oct. 7, 1867.

WANTED, a GOOD GRANITE QUARRY SETT, on moderate royalty and minimum rent. The property should be situated within a fair distance of London, and convenient for economical working, quality of the rock good, and rates of carriage easy.

Full description and sketch of property, with terms of lease, to be addressed to "Capitalist," MINING JOURNAL Office, 26, Fleet-street, London.

WANTED, a SECOND-HAND STONE BREAKER (Blake's) Apply, stating price and condition of the machine, to Messrs. M. J. DAW and DAW, 69, Mark-lane, London.

WANTED, TO PURCHASE, ANY NUMBER OF NEW WHEEL LOVELL SHARES. Sellers please to state number and lowest cash price. Address, "R. E. J.," Commercial Rooms, Bristol.

LEAD ORES WANTED, NOT CONTAINING SILVER.—Samples to be addressed to Mr. P. GLOVER, Bank Quay Lead Works, Warrington.

A GENTLEMAN, having a LONG and EXTENSIVE EXPERIENCE in the MANAGEMENT of MINES in CORNWALL, is OPEN to an ENGAGEMENT ABROAD as GENERAL MANAGER or SUPER-INTENDENT of MINES. Unexceptionable references. Address, "F. G. S.," Post Office, Truro.—August 20, 1867.

A GENTLEMAN, thoroughly conversant with Mining Operations and the general management and development of Mineral Properties, &c. DESIRES an APPOINTMENT as CONFIDENTIAL RESIDENT and MANAGING AGENT. Would collect the rents and keep the general accounts of an extensive estate, and otherwise render his practical experience advantageous to a landed proprietor requiring confidential, trustworthy aid in the management and development of his property. The highest certificates and references of ability and energy, moral integrity, &c., &c. Address, "Fides," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

SLATE QUARRYING.—A Gentleman, thoroughly conversant with Slate Quarry Operations, also their General Management, Machinery, Development, &c., DESIRES an APPOINTMENT as MANAGER, or CONFIDENTIAL RESIDENT and MANAGING AGENT. Would undertake the sale and shipping of the slates, having a large connection amongst slate merchants. Address, "W. S. W.," Green Edge House, Bangor, North Wales.

TO BE SOLD, a SLATE QUARRY, in CARNARVONSHIRE, opened and making profitable returns. A low price will be taken to effect an early settlement. Full particulars, and satisfactory reasons for its sale, will be given by applying to Mr. WM. SCOTT CALLANDER, C.E., Rhyl, North Wales.

FOR SALE, TWO HIGH-PRESSURE VERTICAL PUMPING and WINDING ENGINES, suitable for SINKING TRIAL or other SHAFTS.—Apply to "E. G.," 17, High-street, Cardiff.

TO BE SOLD, CHEAP, a PORTABLE ENGINE of 14-horse power, double cylinder, of first-class construction, workmanship, and material. Winding gear to order. SEND HAND PORTABLES FOR SALE.—Apply to Messrs. BARROWS and CARMICHAEL, engineers, Banbury, Oxford.

THE FREMATOR GRANITE QUARRIES COMPANY (LIMITED). Incorporated under the Companies Acts, 1862 and 1867.

Capital £90,000, in 6000 shares of £5 each, fully paid-up, without further liability. £2 per share payable on application, and £3 on allotment. The directors and their friends are prepared to take up 2000 shares, and the allotment will take place so soon as 4000 shares have been subscribed for. If no allotment is made the deposit-money will be returned in full.

DIRECTORS. Colonel TINKLEY, 3, Cleveland-terrace-gardens, Kensington, W. Major HALE, Woodlands, Harrow. Major DOWN, Harlow, Essex. Kentish Town, N.W. HENRY KNIGHT, Esq., 56, King William-street, E.C. RICHARD MARGETSON, Esq., 3, Coddington-terrace, Kensington-park, W.

BANKERS. Messrs. BARNETTS, HOARES, HANBURY, and LLOYD, 60, Lombard-street, London, E.C. Messrs. GILLS, SONS and CO., Tavistock.

AGENTS. Messrs. FREDERICK GILL and Co. TEMPORARY OFFICES. ST. CLEMENT'S HOUSE, CLEMENT'S LANE, LONDON, E.C.

ABRIDGED PROSPECTUS. This company is formed to work the Fremator Granite Quarries, in Cornwall, situated near Tavistock. Eminent engineers report that the granite is practically unexhaustible and of a superior quality. It has been supplied to many large Government works. The position of the quarry is unusually favourable, being connected by a railway 2½ miles long to Liphmham Quay, where the granite can be shipped into vessels of 200 tons to all parts of the world; both railway and quay belong to the property.

The present working stock can produce 10,000 tons of granite annually, but with a small addition double that quantity can be produced. With a capital of only 20,000 the production would be 15,000 tons, and the profits, based on the results of past transactions, would amount to 15 per cent. per annum on the outlay. The directors are negotiating a contract for 120,000 tons of granite, which has been offered to them on favourable terms.

Detailed prospectuses, with plans, reports, &c., can be had on application to the agents, Messrs. FREDERICK GILL and Co., St. Clement's House, Clement's-lane, London, E.C., or to the secretary, at the offices of the company, where the Memorandum and Articles of Association may be inspected, and the fullest information obtained.

AT A GENERAL MEETING OF THE COAL TRADE, held on the 5th day of October, 1867.

JOHN STRAKER, Esq., in the chair, The following letter from Mr. HUGH TAYLOR, resigning the office of Chairman of the Coal Trade, having been read:—

"Earsdon, October 4th, 1867. 'GENTLEMEN,—Reverting to my former communication relative to my proposed retirement from the honour of Chairman of the General Coal Trade Association for the counties of Northumberland and Durham, I beg to state that, though my general health is, I am thankful to say, deemed improved, it yet continues so precarious as to render it requisite to appoint a successor, as promotive of the interests involved by our important staple production, and perhaps I may be allowed to add, as affording solace and satisfaction to my individual feelings as regards the future transactions of our trade.

"I beg leave to repeat that I feel most sensible of and grateful to the colliery proprietors and their representatives for the unvaried courtesy and support I have experienced during my connection with the executive portion of the trade, comprehending a period of 44 years, although I have only acted as Chairman during the last 23 years. I have the honour to be, Gentlemen, Your most obedient servant.

HUGH TAYLOR. "To the Committee of the Coal Trade of Northumberland and Durham."

It was unanimously resolved, on the motion of JOHN CLAYTON, Esq., seconded by HENRY THOMAS MORTON, Esq.:—

"That this meeting deeply regrets the resignation by Mr. Hugh Taylor of the Chairmanship of the Coal Trade.

"That in accepting Mr. Taylor's resignation of the office, which he has filled for so many years with credit to himself and to the great advantage of the trade, they desire to place on record the high sense they entertain of the valuable services and unceasing attention of their late Chairman.

"They recall with pleasure the unvarying courtesy and ability with which Mr. Taylor presided over the meetings of the association, and the judicious manner in which, on all occasions, he conducted the business entrusted to his direction.

"They would express a hope that he may be blessed with renewed health and strength, and that in his retirement he may enjoy a full measure of that tranquility and repose which have been so justly earned by an honourable, useful, and well-spent life."

On the motion of THOMAS EMERSON FORSTER, Esq., seconded by LINDSAY WOOD, Esq., it was unanimously resolved:—

"That a marble bust of Mr. Taylor be placed in the rooms of the association, as a permanent mark of the respect and personal regard entertained by every member of the trade for their late Chairman."

JOHN STRAKER, Chairman. The Chairman having left the chair, the thanks of the meeting were, on the motion of JOSEPH CHATTO LAMB, Esq., seconded by T. G. HURST, Esq., unanimously voted to him for his conduct in the chair.

STRONG WIREWORK, the cross wires equally bent; also BEST STAMP GRATES, both of iron and copper, and punched copper plates; DITTO TUBED. All the above promptly supplied at W. ESCOTT'S MINING MATERIAL DEPOT, TAYSTOCK, DEVON.

LEAD ORES.

Date.	Mines.	Tons.	Amount.	Purchasers.
Sep. 30	Bronfloyd United	50	£13 17 6	Weston & Co.
	— Clara United	25	12 10 0	Mining Co. of Ireland.
Oct. 4	— Isle of Man Mining Co.	100	14 7 6	Walker, Parker, & Co.
	— Minera	102	12 8 6	ditto
	— ditto	80	12 11 0	ditto
	— ditto	90	12 11 6	ditto
	— ditto	46	12 11 0	ditto
5	— Plynlimmon	40	11 18 6	Runcorn Company.
	— Westminster	50	11 11 0	Slims, Williams, & Co.
7	— Frongoch	65	11 13 6	Runcorn Company.
	— ditto	80	11 14 6	ditto
	— East Darren	32	16 3 6	Martyn Dennis & Co.
	— Cwm Eridon	62	16 2 6	Stock and Co.
9	— Stiperstones	60	12 6 0	Burry Port Co.
	— Frank Mills	35	13 17 6	Stock and Co.
	— ditto	35	13 17 6	Sheldon, Bush, & Co.
10	— Talargoch	34	13 13 6	Walker, Parker, & Co.
	— Bryn Gwlog	108	13 15 6	ditto
	— Trelogan	30	13 3 6	A. Eytton.
	— Holywell Level	30	11 14 6	ditto
	— Hendre	20	11 18 6	Walker, Parker, & Co.
	— Sir Edward	10	11 11 6	A. Eytton.
	— Parrys	3½	11 6 0	ditto
	— North Hendre	10	11 11 6	Walker, Parker, & Co.
	— North Henblas	6	10 0 0	A. Eytton.
	— Pool Park	15	12 15 6	Walker, Parker, & Co.
	— Summer Hill	15	11 1 6	A. Eytton.
	— ditto	15	14 5 0	Walker, Parker, & Co.
	— Mount Pleasant	12	10 18 6	A. Eytton.
	— ditto	3	14 5 0	Walker, Parker, & Co.
	— Dyfnwrm	20	12 4 6	ditto
	— Bwlchcoch	8	11 11 0	ditto
	— Dyffice	47	12 3 6	ditto
	— ditto	47	12 3 6	ditto

BLEND.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Oct. 4	— Minera	50	£4 7 6	Bagillt Company.
	— ditto	50	3 10 6	H. Southern.
	— ditto	55	4 0 6	Bagillt Company.
	— ditto	12	3 10 6	H. Southern.
9	— Trelogan	150	3 7 6	Kenrick and Son.

ARSENIC

Date.	Mines.	Tons.	Price.	Purchaser.
Sept. 14	— Podn-an-drea	50	£2 13 6	Cornwall Arsenic Co.

COPPER ORES.

Sampled Sept. 23, and sold at Tabb's Hotel, Redruth, Oct. 10.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Prosper United	95	£2 16 0	Great South Toigus	43	£3 8 0
ditto	75	1 5 6	ditto	49	6 10 0
ditto	64	3 3 6	ditto	25	3 11 6
ditto	56	4 8 6	Rosewarne United	49	3 19 6
ditto	55	0 19 0	ditto	46	4 1 6
ditto	46	3 7 0	ditto	31	8 2 6
ditto	22	2 0 0	North Downs	50	6 10 6
ditto	17	6 16 0	ditto	41	7 0 6
Carn Brea	75	3 17 6	Crenver & Abraham	48	3 19 0
ditto	60	4 2 6	ditto	34	2 2 6
ditto	44	5 17 0	Botallack	44	8 6 6
ditto	39	9 4 0	ditto	31	8 12 6
ditto	32	5 19 6	Old Pembroke	55	0 4 6
ditto	11	1 12 6	Mellaneur	16	0 10 0
East Carn Brea	46	4 7 0	ditto	8	2 4 6
ditto	39	4 5 6	ditto	3	7 11 0
ditto	36	5 8 6	ditto	2	2 18 6
ditto	31	4 3 0	South Dolcoath	25	2 16 6
ditto	30	1 11 0	Buglehole's Ore	7	2 16 6
Par Consols	80	5 7 6	ditto	7	4 18 6
ditto	70	5 7 6	Rosewarne Consols	16	5 10 0
ditto	30	3 12 6	Huthnance's Ore	10	3 10 6
Great South Toigus	48	4 0 0			

TO PRODUCE.

Prosper United	430	1178 8 6	Botallack	75	635 6 6
Carn Brea	261	1275 8 0	Old Pembroke	55	12 7 6
East Carn Brea	182	737 5 6	Mellaneur	29	54 6 0
Par Consols	180	915 0 0	South Dolcoath	25	97 10 0
Great St. Tolgus	156	857 7 6	Baginbale's Ore.	17	62 14 6
Rosewarne/United	126	634 2 0	Rosewarne Con.	16	88 9 0
North Downs	91	614 5 5	Huthuance's Ore.	10	35 5 0
Cremer & Abrah.	84	302 2 0			

WATSON BROTHERS' MINING CIRCULAR.
WATSON BROTHERS,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON BROTHERS beg to notify to their friends and the public generally that Mr. W. H. CUELL has retired from the firm, in accordance with a clause in the deed of partnership; and having sold to the remaining partners all his right, property, and interest in the business hitherto carried on by J. Y. WATSON, F.G.S., NAPOLEON FREDERICK WATSON, and himself, under the name of "WATSON and CUELL," the same will be carried on in future by Mr. J. Y. WATSON and Mr. N. F. WATSON, under the designation of "WATSON BROTHERS," and they take this opportunity to return their most sincere thanks for the great patronage bestowed and confidence reposed in the firm for 24 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the sharemarket, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., and in the "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON BROTHERS also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON BROTHERS are also daily asked their opinion of particular mines, as well as to recommend mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON BROTHERS having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

"**INQUIRER.**"—In 1847, when mining was in a state of depression similar to that which it has passed through in 1867, there were only 30 dividend mines in Cornwall and Devon, and they paid in that year 155,381*l.* In 1850 the number had increased to 42 mines, paying 213,570*l.*; and in 1855, 54 mines paid 340,714*l.* in dividends. Eleven foreign mines paid 209,320*l.*; Irish, 29,690*l.*; Welsh, 73,351*l.*; Isle of Man, 99,960*l.*; and Scotland contributed 117,18*l.*; grand total of dividends paid from mines in 1855, 597,206*l.* 3*s.* 4*d.* This was a wonderful advance upon 1847, when we remember everyone seemed to think mining was coming to an end; but mining "fascinates more than it deters;" and as one stroke of the pick sometimes reveals a fortune, to console for many losses and trials, it is the maxim of the miner "never to say die;" and for these reasons we shall expect to see it flourish again, and engines be as much in demand as they are now plentiful and cheap. In 1854 Wheal Buller paid 63,760*l.* profit, and may pay again; West Caradon paid 69,12*l.*, and may pay again; and there are others might be referred to in the same way. In 1851 we had the mania for gold mining in California and Australia, and in 1852 gold mining in England, both of which distracted attention for a time from home mining. In "The Progress of Mining" for the years 1851 and 1852, the writer, it is true, as "Inquirer" says, showed up gold mining in general, and entered into calculations showing that the sum of 3,000,000*l.* at least had been lost by the public in gold quartz companies, brought out by the Stock Exchange, upon the mere *ipse dixit* of Yankee and other adventurers. And as our remarks for several years upon gold mining stand on record, we are now asked, and probably very justly, how it is that we so strongly recommend Chontales? We answer that, upon our first calling attention to Chontales in this place, we stated distinctly that it was the *first gold mine* we had ever recommended, and we recommended it because every possible means had been taken publicly to test its value before it was brought out as a public company, and that, as we had also tried every means privately to test the value of the reports, we believed conscientiously, as we still believe, it to be the best thing of the sort ever brought before the public. All those who have been sent out to examine the property have confirmed our original reports; and we are justified, therefore, in expecting the full realization of the profits estimated in the original prospectus, which were over 200,000*l.* a year.

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Notices to Correspondents.

* * Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt: it then forms an accumulating useful work of reference.

IODINE.—Can any of your readers inform me where Iodine is manufactured, the names of the best manufacturers, and the present selling price?—H.

SIERRA NEVADA LAKE WATER AND MINING COMPANY.—Can any reader furnish the present name and address of the secretary, or say what has become of this concern? Its offices were at 5, Tokenhouse-yard, and at the last meeting, which took place so long since as March, 1861, there were the following names on the committee of management—Messrs. Joseph Love, Francis Wedgwood, Charles Robe, Josiah Bates, Francis Horesman, and the Rev. Wm. Cooke.—T.

SOUTH HERODSFOT.—I am exceedingly astonished at the neglected position which this mine occupies in the mining market. It seems to be quite unappreciated, and, indeed, scarcely known, although it lies in close proximity to Herodsfot, one of the richest lead mines in the kingdom, and in the very ran of its most valuable lodes. A depth has now been attained of 86 fms., and a discovery may take place any day that will send up the shares from their present nominal value to 30*l.* or 40*l.* each.—A SHAREHOLDER: Aberdeen, Oct. 4.

PANT DU AND WAENLAS.—Will any reader kindly forward some particulars respecting the present state and prospects of these mines?—SUBSCRIBER.

NORTH TREKKERRY.—I was much surprised to find, at our account, on Tuesday, that our credit balance had sustained such a serious diminution, the amount now being not more than 274*l.*, as against 785*l.* at the last account. I find, too, that while the August costs only are debited, the ore sold on October 2 is credited. No mention appears to have been made of the necessity of a new engine, which, it seems, must be had, and for the payment of which it is obvious a call must be made.—A SHAREHOLDER.

WHEAL TREVENNA.—As the Manchester committee have issued circulars intimating their intention to nominate a fresh board for the ensuing year, I would advise the shareholders to support them in their efforts, by attending, as many as possible, the preliminary meeting, announced to take place in the above city, or by sending their proxies, as the doing so would tend to terminate the present dispute, and be conducive to the best interests of the company.—A SHAREHOLDER.

FRONTINO AND BOLIVIA.—I had hoped the well-timed letter of "A Disappointed Shareholder" would have brought forth some sort of reply from the directors. Every statement your correspondent therein made must be apparently true to every unfortunate shareholder in this most unhappy concern. Surely, the least of our "trustees" can do would be to fulfil their unasked-for promises, and acquaint us whether we are still in possession of that which we used to consider the ashes of which, phoenix-like, the present company was raised. I can well recollect Mr. Johnson, the then Chairman, informing the confiding shareholders he was sorry to inform them that the directors were not in a position to state that the mines were still in the possession of the company, for no information whatever had been received from their manager for many months.—Indeed, that the country was in such a turbulent condition it was impossible to conjecture what the results would be. That statement was made some six or seven years ago, since which the New Granada Company has been wound-up, the Frontino and Bolivia Company formed, and another revolution has broken out. What I want to know is—are the present shareholders to accept the ominous reticence of their directors as a precursor of a reiterated statement by the Chairman at the next general meeting, to the effect that he is sorry to inform them that the directors are not in a position to state whether or not the company still possess the mines, as they have heard from their manager for months past?—AN INDIGNANT SHAREHOLDER.

THE MINING JOURNAL may be had every Sunday morning of M. L. Nicoud Bellenger, rue Rivoli, 212, Paris. Price 65 centimes. Mr. Nicoud Bellenger also supplies all English and American books and newspapers to order.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, OCTOBER 12, 1867.

TECHNICAL EDUCATION—ROYAL SCHOOL OF MINES.

The seventeenth session of the ROYAL SCHOOL OF MINES has just commenced, and it is much to be hoped that the attention which has recently been directed to the necessity for improved technical education amongst those connected with our national industries generally will have the effect of more completely filling its lecture theatres. The professorial chairs are all filled by gentlemen of the highest scientific position; and with regard to the more important of them—Chemistry, Mining, and Applied Mechanics—it may safely be said that the professors have always been thoroughly popular with their pupils, and that their mode of teaching is well calculated to prepare the student for whatever position in connection with mining and industrial pursuits he may afterwards be called upon to fill. The establishment of the School took place in 1851, upon the representation of memorialists, who urged that, although the annual mineral produce of this country (it is now equal to about 40,000,000*l.*) amounted to nearly one-half of the total amount produced by the whole of Europe, the miners and metallurgists of the United Kingdom were unable to obtain that instruction in the theory and the practice of their calling which had long been carefully provided for their foreign competitors in the mining colleges of France and other countries on the Continent, and the effect of which had, in all cases, been a marked increase in the economy, efficiency, and safety of mining operations. It is admitted that nothing but experience in the mine and in the laboratory can confer the skill and tact requisite for the practical conduct of mining and metallurgical operations; but on the other hand, it is only by an acquaintance with scientific principles that the beginner can profit by that experience, and improve upon the processes of his predecessors. But, although the advantages derivable by students who attend the lectures is not disputed by any whose opposition is worthy of consideration, and although the encouragement offered in the shape of exhibitions, scholarships, prizes, and distinctions, is by no means small, the School is but very thinly attended, and comparatively little is heard, after they leave the School, of those who attain the position of associate.

Now, since it must be admitted that 16 years is quite long enough to ascertain the extent to which such an establishment as the Royal School of Mines is appreciated by that portion of the community for which it was originally intended, and as it must also be admitted the School has not achieved so much success as could have been wished, the question naturally arises whether many who have heretofore considered that the curriculum was adapted solely to the wants of miners and metallurgists could not derive any great advantage from availing themselves of the resources of the School. The proposition to offer increased facilities for the acquisition of technical education seems absurd, when our chief technical school is ignored by those who were expected to support it, and has altogether proved, practically speaking, a failure; but it does not follow that technical education is unnecessary, or that the Royal School of Mines is a useless establishment. The School has an able staff of competent professors, admirable lecture theatres and laboratories, and all the requisite appliances for imparting that technical education said to be so much needed, yet its students can scarcely be counted by tens, and the honour of gaining prizes is to a great extent neutralised by the want of numbers to compete for them. How is this state of affairs to be changed in such a way as to raise the Royal School of Mines to an honourable position amongst the great educational institutions of the country?

The two great considerations with all who seek technical education, or, perhaps, it would be more accurate to say with all to whom technical education would be useful—for there are many that might pay the fees who, considering that education should be not an aid to but a substitute for labour, benefit neither themselves nor the schools they study in by becoming students—in judging of the relative merits of schools, are the nature of the education obtainable, and the cost at which it can be obtained. In both of these respects the Royal School of Mines offers advantages which could scarcely be found elsewhere. It would be difficult to mention any of our national industries the principal of the workers connected with which would not be benefited by the possession of a sound knowledge of practical chemistry, physics, and applied mechanics, and nowhere could that knowledge be so cheaply and thoroughly acquired as in the Royal School of Mines. Nor is there anything to prevent a very large number of our industrials aspiring to the position of Associate of the School, although they may not be immediately connected with mining. The fees for those intending to take a three years' course amounts to but 20*l.* a year, and the instruction given would be very generally useful. During the first year the studies would embrace Chemistry, with laboratory practice; Physics, and Mechanical Drawing; in the

second year, Mineralogy and Geology (both of much more general application in industrial pursuits other than mining than is generally supposed) would be studied, and Mechanical Drawing continued; and in the third year, which is the most special of the three, the time of the general student would not, even under the present arrangement, be wasted; whilst by the addition of a fourth, or Industrial Division in the third year's course, embracing Chemistry (Inorganic and Organic), Assaying, and Applied Mechanics, the wants of all classes would be thoroughly supplied, and the prosperity of the institution as a Technical School would be, in all probability, secured.

That the chemical lectures are adapted to the requirements of all classes of industrials, it is only necessary to refer to the syllabuses of the lectures and laboratory practice. The instruction in chemical science embraces a course of lectures on experimental chemistry, with special reference to the applications of chemistry in the arts and manufactures, and a systematic laboratory course for the practice of chemical analysis. The course consists of 40 lectures on Mineral Chemistry, and 30 on Organic Chemistry, every one of which is calculated to be of value to the student, whatever branch of industry he may afterwards be engaged in. The general laboratory for instruction in chemical manipulation, in qualitative and quantitative analysis, and in the method of performing chemical researches, is under the direction of Dr. FRANKLAND, and the spacious and well-furnished laboratories of the Royal College of Chemistry, which is the property of the Government, are used for the instruction of the pupils. The course of laboratory instruction commences with experimental exercises, calculated to make the student practically acquainted with the general properties of the simple substances, and of their most important compounds, and then studies those properties of bodies on which their detection, separation from each other, and estimation depend. The knowledge thus acquired is put into practice in leading the student, step by step, from the simpler to the more complex cases of qualitative and quantitative analysis.

Particular attention is paid to the use of the blow-pipe, and the various methods of testing and estimating the value of commercial and industrial products, alkalimetry, chlorimetry, and volumetric analysis in general. After sufficient practice and skill in experimenting has been acquired, the course of the student diverges into some special line, which will vary with his abilities and ultimate objects. Each laboratory student works independently, there being no classes. All operations are superintended by the professor and his assistants. Each pupil has his own drawers, cupboards, and shelves. The institution supplies gas, fuel, and reagents; and the large and more expensive instruments of the laboratory, such as air-pumps, thermometers, barometers, condensers, &c., may be used by the students, who are held responsible for their safety.

The other courses of study, in what would form the general industrial curriculum, are arranged with the same attention to general utility as that of chemistry; and as facilities are offered for those who enter the School sufficiently prepared to complete the course of study in two instead of three years, it may fairly be assumed that it is only necessary to make the resources of the institution more extensively known, beyond the immediate circle of miners and metallurgists, to secure it a large amount of support from the industrial community generally, and to engraft upon it all the advantages of such a school as the "Arts and Metiers" of Paris. By thus concentrating the industrial students of the country, and availing of the appliances of an existing establishment, we might secure the benefit of one thriving technical school without unnecessary expenditure, whilst the probable result of any attempt to promote a special school for facilitating technical education would be an addition to our existing educational failures.

VIOLENCE BY COLLIERY UNIONISTS.

Probably it is owing to the success which attends all determined efforts to put down the nuisance of the undue interference of Unionism with the transacting of business, and especially the success of such efforts by certain colliery proprietors, that violence is now being resorted to in South Derbyshire, and at Pontefract, to prevent colliers who are willing to work, unshackled by Unionism, from earning their bread. But from whatever motive such violence proceeds, it will utterly fail of its purpose; and the chief actors will be punished by the operation of the law, which declares the labour of every man in this country to be as free as himself.

Mr. JOHNSON, the agent for Lord CHESTERFIELD, has resolved that the operations of the collieries, of which he has the management, shall be no longer impeded by the hampering effects of Unionist interference. And he is, as the readers of the Journal are aware, supported by the proprietors of other collieries at Church Gresley, Newhall, and Swadlincote. The Unionist managers, determining to compel the coalowners to employ only members of the Union, called out those members who remained at work. Last Thursday week Mr. JOHNSON was conducting, with the aid of a few policemen, a number of non-Unionist men to work at the Bretby Colliery, when they were intercepted by one JONAS HOOPER, who is described as the secretary to the Miners' Association for the Gresley and Swadlincote district, who had the command of a gang of Unionists. Strong efforts were made to induce the latter to return, but the men were staunch, and went on towards the pit. Finding persuasion, and the offer of bribes useless, the Unionists ran on in advance and drew up in a line at the colliery gate. The officers of the law now interfered, and forced a way, but the Unionists laid hold of one of the new workmen, and, pulling him back, attempted to prevent him by physical force from going to the pit. For this offence HOOPER was, on Monday taken before the magistrates at Swadlincote, and after a hearing of some three hours—protracted to that length by the pleading of an attorney named WAINWRIGHT, who acts as solicitor to the Miners' National Association—he was ordered to be imprisoned a month in Derby Gaol, but was allowed to go at large upon his sureties, who pledged themselves for his appearance at the next Derbyshire Quarter Sessions, when the decision of the magistrates is to be appealed against; of course, at the cost of the wives and families of the miners who are members of the Union. It is announced that great excitement prevails in the district, that the Court House was thronged, and that, fearing serious outbreaks, extra policemen have been placed upon duty, and special constables sworn in.

Yet, more serious violence is being offered near to Pontefract. At the Victoria Colliery, Syndale, a number of Unionists struck work some time ago, and their places were filled by non-Unionists. These latter have, however, had but little peace, and on Sunday night last a conflict ensued between about 20 Unionists and non-Unionists, and formidable weapons being used serious effects followed. Several men were badly injured. A man named WARD was much hurt, and another, named SPEDDING, was dangerously wounded on the head. Three of the rioters have been arrested.

These excesses by miners are very deeply to be regretted, inasmuch as they not only occasion rancorous feelings between the men, but they also prevent that cordial understanding between masters and men which contributes so largely to the comfort of both, and are indispensable to the progress of the operatives. The employers can bear the little loss that will result from the opposition of the Unionists, aware, as they are, that, even in a business point of view, the investment will be productive, by the greater economy with which their property will be worked by men who are freed from the interference of the Unions. No one will permanently suffer but the deluded men and their families, who are blindly opposing a state of things which is inevitable.

As with the operative tailors of London, who have just been compelled to return to work unconditionally, and as it was with the colliers throughout South Staffordshire, after the last great struggle there, so also will it be in South Derbyshire: the men will have to accept their masters' terms, and at no distant date the South Yorkshire proprietors may look for the abolition of that state of things which has given the Miners' Union predominance there, and has thereby materially reduced the current value of their property. Meanwhile the employers in South Derbyshire by the establishment of a Free Labour Provident Society are showing that they desire the best interests of their men. In contradistinction to this, take the speech on Monday last, at Masborough, of JOHN NORMANSELL, during a demonstration of the miners of South Yorkshire, who, after saying that they were about to send 200*l.* into Derbyshire, and that they would

and 1000*l.*, if required, indulged in the rapid boast that they were about to "fire a shot into the very midst of free labour associations, and smash them up."

THE UTILISATION OF SMALL COAL. PRACTICAL EXPERIMENTS IN SOUTH WALES.

At the meeting of the members of the South Wales Institution of Engineers, held at Swansea in September last, a paper on this subject was to have been read by Mr. ALEXANDER BASSETT, C.E., of Cardiff, but the length of the discussions in connection with the preceding papers precluded that, as well as several others, from being submitted to the meeting. Since that time a quantity of fuel has been made at Aberaman, near Abertawe, by Mr. BASSETT, for the Powell's Duffryn Steam-Coal Company, from the small coal produced from the various seams in the Aberdare district, and has been used with very great success in some of the locomotives in that district. On Sept. 19 and 20 some important and interesting experiments were carried out on the Taff Vale Railway, by the permission of Mr. FISHER, C.E., under the superintendence of Mr. TOMLINSON, the locomotive superintendent, who made all the arrangements for thoroughly testing the value of the fuel.

We are informed by Mr. BASSETT that on Sept. 19 the engine made two trips from Cardiff to Aberdare and back, working over 100 miles, exclusive of shunting. The average gradient against the load being $\frac{1}{4}$ in 300; the average load throughout the day was 488 tons. The fuel used, which was made from a slightly bituminous steam-coal, represented 50.12 lbs. per inch, but if the weight of the engine and tender, together with the time occupied in shunting, be taken into consideration, then the quantity used per train mile was equivalent to 4059 lbs., or .077 lbs. of fuel used to the ton carried. The quantity of water evaporated during the day was 8.1 lbs. for each 1 lb. of fuel used. On the following day's experiments the same engine worked over the same gradients and distance, the average load throughout the day being 521 tons, the quantity of fuel used being 50.63 lbs. per mile, but if the weight of the engine and tender be taken into consideration, together with the time occupied in shunting, the consumption of fuel was 41.7 lbs. per train mile, or .073 lbs. of fuel to each ton carried. The quantity of water evaporated was 9.14 lbs. to each 1 lb. of fuel used. The engine in every journey travelled at the maximum speed allowed on the line for mineral trains, and the pressure of steam was abundant.

A series of very careful experiments were made in 1858 by Mr. TOMLINSON on the evaporative power of the Aberdare and Rhondda coals, by which it appeared that the highest duty obtained was 8.63 lbs. of water, evaporated by 1 lb. of coal; the average of 34 experiments being 7.90 lbs. of water evaporated per 1 lb. of coal. It will be seen that the results of September 20 were superior to those of the previous day; this undoubtedly arose from the experience obtained in using the fuel to greater advantage. Mr. BASSETT considers that had there been sufficient fuel left to have continued the experiments for another day, a further increased duty would have been obtained.

The fuel used in these experiments was not waterproofed, but the London Patent Coal Company have manufactured a large quantity impervious to moisture, and this can be thoroughly and efficiently done at a small cost. We are informed that Mr. TOMLINSON has expressed a very decided opinion on the importance of waterproofing the fuel required for locomotive purposes. In all probability Mr. BASSETT's paper on this subject will be printed, and a copy sent to each member previous to the next meeting of the South Wales Institution of Engineers, in which the details of the experiments made both on the Taff Vale Railway and the Monmouthshire Railway will be given, together with Mr. TOMLINSON's report; also, the results of a series of experiments to prove the value of the fuel for domestic purposes. The estimated cost of converting the small coal into fuel of the same character as that used in the trials, but exclusive of the royalty, will be from 2*s.* 4*d.* to 2*s.* 6*d.* per ton.

THE CHAIRMANSHIP OF THE NORTHERN COAL TRADE.

The resignation of Mr. HUGH TAYLOR from the Chairmanship of the General Coal Trade Association for the counties of Northumberland and Durham, has been received with much regret, and at the meeting of the Coal Trade, on Saturday, resolutions recognising his great services to the trade, and ordering a marble bust as a permanent mark of respect to be placed in the Association's rooms, were unanimously passed. Mr. TAYLOR had been connected with the council of the coal trade for 44 years, and for nearly a quarter of a century has occupied the position of Chairman. The remarks of Mr. JOHN CLAYTON, at the meeting referred to, well express the feeling of the members of the trade generally. In moving the resolution expressing the respect of the Association, he observed that Mr. TAYLOR had represented very great interests in the county, and he had, therefore, possessed great power; but he had wielded that power in a manner consistent with the most enlightened views, and in every way suited to advance no less the general prosperity of the district than the interests of those he represented. They had considerable experience of Mr. TAYLOR. They had seen his able and judicious management of the affairs of the coal trade for many years. No one who had seen Mr. TAYLOR in the discharge of the duties of his office but must feel the greatest respect for him. Not only had he conducted the business in an able manner, but his kind disposition and conciliatory course of action had acquired for him a degree of personal influence which it had been the privilege of very few persons to attain. He really felt considerable pain in separating from him. Under his auspices the coal trade of Northumberland and Durham had maintained its high position at the head of the coal trade of the world. Mr. TAYLOR had lived to see it attain a state of prosperity unknown at any former period of its existence. Mr. T. E. FORSTER, in proposing the resolution for placing Mr. TAYLOR's bust in their rooms, observed that during the 38 years he had been connected with Mr. TAYLOR he had always found him as a master most conciliatory in his manner, and as a Chairman most efficient.

UNION AND CO-OPERATION IN THE IRON TRADE.

Movements of an opposite character which are taking place amongst operatives engaged in the manufacture of iron call for notice. A fortnight ago what is termed amongst a certain class of people a demonstration came off in South Staffordshire. It was inaugurated by the executive of the Ironworkers' Association of that part of the Kingdom, and it seemed to have a threefold object—(1) to stimulate the ironworkers of the district to renewed interest in Unionism; (2) to endeavour to restore the combination which once existed between the ironworkers' Association of the North and the South of England respectively. That combination was broken up by the last great struggle between the employers and the employed in the iron trade of this country; and since that time there has been little or no cohesion between the different societies forming the respective Unions. Nevertheless, paid officers have been supported.

In the North there has been a paid president, and in the South a paid secretary. In each case, however, there would seem to be reason to conclude that the respective funds are contributed by only small sections of operatives. The demonstration at Brierley Hill would seem to have been confined to the lodges—stated to be fourteen in number—which comprise the Brierley Hill district, and the inference is that, saying that district, there is no Unionism worthy of the name in South Staffordshire, certainly that to that district the whole Southern Association is limited. The disruption mentioned was accelerated by the efforts of the Northern Union to bring about a state of management in which there should be only one president, and the head quarters of the combined Union in Manchester or thereabouts. The Brierley Hill men held to their old locality, but a few of the lodges of the South went with the North. The rest, if they continued to carry out Union principles at all, were altogether distinct from the executive, but the larger number are believed to be altogether broken up.

Most of the men who are out of society are so because of their want of faith in the power of the organisations to which they once belonged to bring about the results promised. Certain of the best educated had much more faith in co-operation than in Unionism, and there was much talk of a co-operative works being started in South Staffordshire. The same views would seem to have influenced many of the northern men, and these latter have been the first to take steps to carry out their views into effect. At the beginning of this year a company was projected for the making of finished iron in Darlington. It was to be worked upon the co-operative principle. The shares were fixed at 5*l.* each, and a few months ago 4000 had been taken, and 4500*l.* expended in laying down plant on 10 acres of land, which had been purchased as the site of the works. What is described as a "blitz" occurred in the conveyance of the land, through some difficulty in the mortgage. It is explained that the men had evidently made the mistake of appointing only their own co-workers to manage the affairs of this society, instead of engaging to aid them a commercial man; to this is attributed a delay which has prevented their arrangements having only just been completed. With a view of reviving public confidence in the company which has been

shaken by the mismanagement, a meeting was held in Darlington, on Monday, to which the public were invited, and at which several other gentlemen, with also a representative of a co-operative concern in Yorkshire, were the speakers. As might have been expected, confidence was expressed in the successful future of the concern, and the announcement of this result is followed with the little business statement that "it is expected that now its affairs have got into better order the shares will be taken up, and the works successfully carried forward." Mayhap, they will. But, whether they prove successful or not, every ironmaster will rejoice that the scheme is likely to get under weigh. It would be a further cause of satisfaction to the trade if a similar undertaking should be started in the South. The men would then be better able to appreciate what are the difficulties which surround the carrying on of a mill and forge; and they would thereby be less prompt in using their combinations to harass their employers, by striking for wages which cannot be given, and thereby diminish the fund out of which wages are supplied.

We are not prepared to say that the efforts of the few remaining Southern Unionists to restore the confederation between the North and South were due to the certainty which seems looming, that unless such a confederation takes place, the Southern Union, whatever may become of the North, must soon cease to exist; but it is somewhat suggestive that at the demonstration a resolution should have been passed, desiring a confederation, without conditions as to the locality where the executive shall sit, and with this reservation only that the President shall not be a salaried officer. A large amount of good money has been spent by these Unionists to no practical purpose, and the most sensible of the ironworkers know it. They may well be congratulated that, knowing it, they seem to have come to the determination that no more of that for which they have so laboriously toiled shall be thus squandered.

A NEW JOINT-STOCK IRON COMPANY.

One of the largest blast-furnace and colliery concerns in South Staffordshire is that which is known as the Parkfield Iron Company. The works consist of five blast-furnaces, one of them of very large dimensions, and upwards of 240 acres of collieries. With comparatively slight exceptions, all the coal and stone used is mined on the estate, out of which, notwithstanding that it was regarded as worked out when it was taken to, a million tons of coal have been obtained since it has been in the possession of the existing proprietors, and it is believed another million will yet be got. The concern was started by a gentleman of great experience in South Staffordshire, who also subsequently carried on some works in South Wales, Mr. E. B. DIMMACK. Recently, Mr. DIMMACK handed over the Parkfield estate to his son-in-law, Mr. HENRY MARTEN, a civil engineer of much ability, and by him, Mr. DIMMACK residing with him, the works have been continued. During the past week or two negotiations have been on foot for the making of the concern into a joint-stock company, upon the limited liability principle. Those negotiations are now completed, and on Thursday the deed was sealed. Mr. MARTEN has let the property to a respectable and influential company for a certain number of years. The terms of the lease are favourable to both sides, and Mr. MARTEN, who has been connected with the estate ten years, will be retained as manager, and Mr. DIMMACK will be upon the board. Arrangements have been made for the discharge of all existing liabilities, and there is every prospect of the concern being carried on, not only with energy, but also with success. It is not improbable that steel on an entirely new process will be manufactured by the new company, which has been formed without any public announcement.

MINING AND METALLURGICAL PRODUCTS AT THE FRENCH EXHIBITION.—In the Supplement to this day's Journal will be found the very valuable and elaborate Report of Prof. WARINGTON SMYTH, prepared for the Committee of the Council of Education, upon the Mining and Metallurgical Products at the French Exhibition. It is unnecessary to state that the report contains an enormous amount of valuable information upon the subject, since the fact of its being prepared by Prof. SMYTH is an ample guarantee in that respect; but it may be mentioned that he has taken especial care to make the report interesting as well as useful, by referring to the several branches of the subject under distinct heads, and thus enabling the reader to see at a glance the progress which has been made in, and the relative merits of the mechanical contrivances employed in each country.

STEEL FROM COMMON IRON.—Practical men are still investigating this matter, one to which attention was drawn in the Journal some time ago; and they express every confidence in its practicability. The most recent experiments go to the belief that it will be possible to make good rails of it, and to roll them direct from the converter without the intervention of the puddler, the steel having been conveyed to the converter in a fluid state from the furnace in which the ore has been smelted. The experimenters go further; they believe in the practicability of rolling other kinds of articles—articles requiring more manipulation than rails—also direct from the converter. Machinery has, however, to be completed, and patent rights have to be adjusted; but no serious obstacles are being imposed on the other hand. In a short time the experiments and arrangements will be so far completed that we are assured will lead to practical results of a most gratifying character.

RAILWAY AFFAIRS IN SPAIN.—It is to be feared that the Belgian metallurgists who accepted obligations for work and labour done by them for Spanish lines will find themselves grievously disappointed by the financial results which they have entailed upon themselves in consequence. A most important announcement has been made this week—that the Northern of Spain Railway Company has been compelled to suspend payment of the interest which became due upon its obligations on Oct. 1, the suspension taking place for the best of all reasons—because the insufficiency of the traffic, and the heavy interest payable on the large floating debt due to the Spanish Crédit Mobilier, deprive the directors of sufficient funds with which to meet the company's liabilities. The company is the second large railway undertaking in Spain, and great rejoicings took place when it was opened throughout for traffic early in the autumn of 1863. In four short years this unfortunate line—which is a fair representative of most of the railway enterprises of Spain—has involved those associated with it in disaster and disappointment.

LEASES OF CROWN MINES.—In consequence of the Commissioners of Woods and Forests requiring that in all future licenses or leases granted by them a clause shall be inserted, providing that if the licensee or lessee sell or otherwise dispose of the mine, or quarry, granted one-fourth of the consideration received shall be paid to the Crown (deducting only from the full purchase-money the actual cost incurred), a meeting was held at Douglas, Isle of Man, on Saturday Mr. CHAS. TETLEY in the chair, to consider what steps should be taken in the matter. It appears to be admitted that the clause is not objectionable, except in the case of renewal, and it seems that, except in Mr. TETLEY's case, the Commissioners have in every instance consented to withdraw the clause where the licence or lease is simply a renewal of one previously existing without it. The clause will be advantageous in ordinary cases, since its obvious tendency is to prevent fabulous prices being put upon mining properties, and thus protect the public. Of course, a vendor can, as heretofore, sell his rights for one-third of the company's capital, although it may be worth but one-tenth the amount demanded, but he must pay the penalty for doing so—thus, assuming it is desired that a mine worth 4000*l.* be sold for 400*l.*, to a company with a nominal capital of 120,000*l.* it can be so sold; but in such a case, as the Commissioners become entitled to the fourth of the 40,000*l.*, and that one-fourth must be paid in cash before the lease can be transferred, the vendor and his friends are compelled to pay 10,000*l.* for the one-third share of a property worth 4000*l.*—an arrangement which but few vendors or promoters will be likely to consider favourable to themselves. The clause is in every way calculated to encourage legitimate speculation, and to render fraudulent speculation unprofitable. The result of the meeting was that no action was taken with regard to new leases, but to endeavour to secure the continuance of the same terms in renewals of existing leases. Messrs. STEWART and BAXDEN were appointed a committee to call upon the principal shareholders in the various mining companies, for the purpose of securing their co-operation in whatever steps it may hereafter be considered desirable to adopt.

DISCOVERY OF A NEW ORE IN THE ISLE OF MAN.—The Foxdale Mine, in the Isle of Man, is already one of the richest lead and silver mines in Great Britain; but its value has been very much increased by the discovery of an ore hitherto unknown to exist in the Isle of Man. The name of the ore is "Fahlerz" (tetrahedrite). It yields an immense amount of silver, and practical miners say that when this ore is found in a mine it is increasing in value as it gets deeper. The principal place where the ore is found is the Harz mountains. The Fahlerz of the Foxdale mines is found to exhibit the same tendency to become coated with copper pyrites that is elsewhere observable, and the gangues accompanying it, sphatose iron and quartz, are all similar. During the past year lead and copper ores to the value of 33,475*l.* have been raised at this mine. The cost of labour, materials, &c., was 29,416*l.*; and dividends to the amount of 5600*l.* have been paid to the shareholders.

IMPROVED PUMP-BUCKET.—Mr. JACOB BIRD, of Bromborough, Cheshire, exhibited a new air pump-bucket, in which he claims that the friction is greatly reduced, and a better vacuum obtained. The perforated cover is raised as the bucket descends, and raises with it a cylindrical wedge-shaped spring, which loosens the metallic packing, and leaves the bucket free from friction against the sides of the pump. In the ascent of the bucket the perforated cover is forced downwards, and carries with it the wedge-formed spring, forcing it

between the metallic packing and the ring of the bucket. The metallic packing is thus forced against the side of the pump at the moment it is required to lift the fluid. There is, therefore, no friction against the sides of the pump in the down-stroke, and only sufficient in the up-stroke to render the bucket tight.

REPORT FROM NORTHUMBERLAND AND DURHAM.

OCT. 10.—The Coal and Coke Trades continue, on the whole, good, but the general state of the Iron and other trades are not, it must be confessed, improving so rapidly as was expected a short time ago. Iron shipbuilding, however, at Jarrow and other places does improve, and many orders for vessels of various kinds have been received.

A notable circumstance connected with the Coal Trade is the final retirement of Mr. Hugh Taylor from his office of Chairman of the Coal Trade Association of these two counties, which he has long held with great credit to himself, and the advantage of the trade generally. This step has been compelled by declining health, and much regret is expressed in consequence. Mr. Taylor has been intimately connected with the trade upwards of 40 years as mining engineer, manager, &c. He was at one time mining engineer for the Duke of Northumberland, and afterwards held a most important office as chief commissioner for the same nobleman. A meeting was held at the Coal Trade Office in Newcastle, on Saturday, when the chair was occupied by Mr. John Straker. Mr. John Clayton moved:—

"That this meeting deeply regrets the resignation by Mr. H. Taylor of the chairmanship of the Coal Trade, that in accepting the resignation of Mr. Taylor, which he has filled so many years, they desire to place on record the high sense they entertain of the valuable services and unceasing attention of their late Chairman," &c.

This resolution was seconded by Mr. H. T. Morton, and carried unanimously. Mr. T. E. Forster proposed the next resolution:—

"That a marble bust of Mr. Taylor be placed in the rooms of the association as a permanent mark of the respect and personal regard entertained by every member of the trade for him."

Mr. Lindsay Wood seconded this resolution, which was unanimously adopted. This will certainly prove a most grateful remark of respect to Mr. Taylor in his lifetime. The Taylor family have during many years occupied a very high position in the mining and commercial world here, the late T. J. Taylor, nephew of Mr. H. Taylor, being one of the most eminent scientific mining engineers of this country.

On Thursday an interesting excursion to the Ryhope Colliery was made by the captain and officers of the French corvette, *Limier*. The company were conveyed by special train to the colliery, and descended the workings. It was intended that the visit below should not occupy more than an hour, but so interested were the visitors with what they saw, that an exploration of the interior of the mine was determined on, and two hours were spent away from daylight. Many of the explorers hewed for themselves pieces of coal, which they carried away as mementoes of their visit. They reached the upper world again at half past 3 o'clock, and, having restored themselves to their former appearance, adjourned to the schoolroom, where a champagne luncheon, provided by the owners of the colliery, and supplied by Mr. Shiel, of the Queen's, was spread. An inscription in the room welcomed the visitors to Ryhope. The chair was occupied by Councillor John Nicholson, one of the owners, and the vice-chair by Mr. William Taylor. After the usual loyal toasts of the Queen, the Emperor, Empress, and Prince Imperial of France, the Chairman proposed the healths of Capt. Bruat and officers of the *Limier*. He said it afforded him great pleasure to see the French officers that day at Ryhope, and, after their visit to the workings, he was satisfied they would leave Sunderland with the impression that the works that they had that day inspected were not equalled in the whole of England. The return train stopped at the Londonderry station, from whence the officers proceeded to inspect the new dock, descending to the bottom, where the works were explained by Mr. McDonald, the deputy engineer, the civil, mason work, &c., being examined. With this and the trip to Ryhope the visitors were very much pleased.

At the Northern Institute of Mining Engineers meeting, on Saturday, there was a large attendance of members, the chair being occupied by the president, Mr. T. E. Forster, and among those present were Mr. Atkinson and Mr. Lionel Brough, Government Inspectors. The first business before the meeting was the election of several new members. The subject of the purchase of a site for the erection of a new hall was then introduced, and it appears that the committee appointed to manage this part of the business have made important progress, and the whole subject will be shortly laid before a special meeting. As the number of members continue to increase most rapidly a larger hall and more commodious premises are an imperative necessity.

The discussion of the important paper of Mr. Waller on "Pumping" was then taken, and it proved most interesting.

A short paper was read by Mr. Stephenson on "Lifting Water by means of Tubs and Winding Engines," and a comparison given as to those different modes of lifting water. Further particulars as to pumping were also given by Mr. Waller, so that the whole of the papers, including those of Mr. Stephenson and Mr. Waller, and the discussion thereon will prove a valuable addition to the "Transactions" of the Institute.

A paper was read by the Secretary on a "New and Ingenious Mode of applying the Water Gauge," which has been adopted by Mr. Daglish. The paper was contributed by Mr. Daglish, and, in his absence, read by the secretary. The object of this application of the water gauge is to include the shaft resistance in its indications, which is not the case with the ordinary gauge, the latter only giving the resistance met with by the air in traversing the air-channels of the mine. For particulars as to the mode of effecting this object we must refer to the paper, and here we may remark that the "Transactions" of the year, so far, possess much interest.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

OCT. 10.—The quarterly meetings of the Iron Trade of South Staffordshire have been held this week. The meeting at Wolverhampton, yesterday, was thinly attended, but to-day at Birmingham the Town Hall was occupied by a numerous gathering. There have been considerable sales of pig-iron, but the talk of an advance in price has proved to be without foundation. The general tenor of the opinions of the leading men connected with the trade is that the demand for manufactured iron is rather quieter. We are entering on what is usually the duller quarter of the year, and some reaction from the undoubted improvement since midsummer is not improbable. It is, perhaps, about a fair estimate that the works in the South Staffordshire district are turning out from two-thirds to three-fourths of their full production. United States orders are rather slack, but there is a fair demand for India. The trade naturally fluctuates a good deal. On the one hand, there are no stocks, and on the other, the works not being fully employed, orders given out are promptly executed, hence there is but a very small reserve in hand to keep the trade steady. Considering the general distrust, which checks all commercial ventures, the Iron Trade cannot be considered to be in an unsatisfactory position. There is naturally a disposition to look with unusual scrutiny at the paper taken either by sellers or by the banks. Considering, however, the long continuance of the depression, and the fact of two important local banks having shut at Birmingham, the limited extent of the failures in South Staffordshire and Birmingham affords good grounds for congratulation, and it may be hoped that, while no doubt there are still weak firms, they are fewer than was the case some years ago. The Hardware Trades of Birmingham and of South Staffordshire continue dull, and perhaps the gun trade is almost the only branch in which activity prevails. The demand is, however, not worse, and is, perhaps, rather better, if anything, than it was a fortnight ago, but the workmen are not fully employed. The manufacturers of cast hollow wares and common locks are, probably, as much depressed as any branches. It is, however, not improbable that the moderate, but safe, trade doing this year will be as profitable as the much larger business of 1866, when profits were diminished by bad debts.

The exceptional activity of the gun trade noticed above, is confirmed by the fact that Mr. Tranter, an established maker in Birmingham, is erecting an extensive factory near that town for the production of guns and pistols by machinery. These works cover a space of four acres, and are constructed on a similar principle to those of the Government at Enfield. Mr. Tranter has already commenced the manufacture of Chassepot rifles for the French Government at a part of the works sufficiently advanced for occupation, and it is calculated that when in full operation they will be able to turn out 1000 rifles per week. In connection with the same destructive branch of manufacture, it may be mentioned that Messrs. Deakin and Johnson, patentees of the new method of producing steel barrels by punching and rolling, have removed their manufacture to the Albion Works, near West Bromwich, where they are carrying on operations on a more extensive scale. They make steel tubes for machinery as well as rifles, and the invention is, apparently, capable of wide application.

It is stated that the Parkfield Ironworks, which consist of five blast-furnaces, and ironstone and coal mines, are passing into the hands of a limited company, but that Mr. H. Marten, the former proprietor, is to continue to manage them. It is anticipated that the manufacture of Bessemer steel may be carried on at these works.

The lock-out of miners in South Derbyshire by the masters, with the view to avoid employing men connected with the Union, is still

From these results it is concluded that the method of adding the zinc, and subsequently sweating off the lead, the latter is very largely desilverised, and it seems probable that if the proportions of zinc added had been slightly modified, the desilverisation in the instance referred to might have been made even more complete. Although the examination of "zinc-lead" was so unsatisfactory, yet it does not affect their conclusions, as it is evident that it must contain all the precious metals, excepting the trifling amount of silver left in the pure lead. Secondly, they have no reason to suppose that any loss, other than mechanical, can occur in the distillation; and the nature of the retorts, which also admit of being very easily and economically heated and worked, and the arrangements for reworking all refuse, provide completely against any such mechanical loss. The process to which the present bears the nearest resemblance is that of Parkes, but Prof. Chandler and his assistants were unable to

give an opinion upon the novelties claimed by Mr. Balbach. They observe, however, that the whole course of his operations struck them as being remarkable for simplicity, economy, and efficiency; and the examination of the refined lead showed that whilst it contained but little precious metal, it is not injured for the market by its temporary admixture with zinc.

MINERAL STATISTICS OF GREAT BRITAIN.

BY MR. ROBERT HUNT, F.R.S.
LEAD AND SILVER.

The Total Quantity of LEAD ORE raised and sold in the UNITED KINGDOM during 1866, and SILVER obtained, was as follows:—

Lead ore	Tons 91,047 15	Value £1,161,228
Lead	67,390 14	1,381,609
Silver	636,188 ozs.	174,951

ZINC.

The total quantity of zinc ores, principally sulphide of zinc (black jack) from British Mines in 1866 was 12,769 tons 20 cwt. 2 qrs., the value of this ore being estimated at about 42,665. 4s. The average produce of the ore being 25 per cent. gives the produce of metallic zinc as 3192 tons 10 cwt., which quantity, computed at 21. 18s., the average market price of zinc for the year, would give the sum of 68,915. 4s. 6d.

IRON PYRITES.

Cornwall	Tons 9,533 17 2	Value £ 9,634 15 7
Devonshire	915 4 0	729 7 3
Durham and Northumberland ..	5,000 0 0	4,750 0 0
Yorkshire	3,000 0 0	1,625 0 0
Lancashire	2,750 0 0	1,250 0 0
Wales	1,517 5 0	907 16 0
Ireland	112,686 6 1	59,036 0 0
Total	135,402 12 3	£77,932 18 10

GOLD.

Vigra and Clogau	Tons 1159 19 0	Ozs. 213 14 22
Castell Carn Dochan	1768 0 0	529 1 12
Total production Welsh gold.	2927 19 0	742 16 10

ARSENIC.

Mines selling crude arsenic.	Quantities.	Value.
Carn Brea	Tons 146 12 0	£ 153 17 2
Crofty, North	109 2 0	153 17 4
East Pool	212 20 1	235 12 10
Fortune, Great Wheel (estimated) ..	150 0 0	186 14 5
Jane, Wheel	1 0 0	0 10 0
Okel Tor	35 0 0	21 0 0
Prosper United	196 17 1	216 18 4
Pedn-an-drea	75 0 0	83 0 0
Seton, Wheel	99 0 0	137 13 6
Seton, West Wheel	85 10 2	106 17 6
Union, Wheel	5 16 0	5 15 3
Total	1116 15 0	£1301 9 4

GOSSANS, OCHRES, AND UMBERS.

Ruby, Great Wheel	Tons 5 0 0	£ 2 10 0
Falmouth and Sperries	642 10 2	346 6 11
Jane, Wheel	298 14 2	994 1 8
St. Day United	30 3 0	22 12 0
Total from Cornwall	1676 7 0	£1365 10 7
Devonshire—Sundry mines	97 0 0	48 10 0
Isle of Man	130 0 0	75 0 0
Anglesea—Mona Mines	3125 0 0	1560 0 0
Total of goossans, &c.	5028 7 0	£3049 0 7

FLUOR SPAR.

Cornwall—Damsel, West Wheel	Ton 1 11 0	Value £1 17 3
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PETROLEUM FOR FUEL—ITS ECONOMY CONSIDERED.—The following is a résumé of our conclusions on the amount and the cost of the heat generated by the combustion of petroleum. Petroleum, weight for weight, has 50 per cent. more heating power than coal, a fact expressed by the ratio 21 to 14, or 3 to 2. If oil costs 21 cents per gallon and coal \$6 per ton, then the oil heat costs six times more than the coal heat. Oil, equivalent in price to coal at \$6 per ton, would cost 3½ c. per gallon; and coal, equivalent to oil at 21 c. per gallon, would cost \$36 per ton. It should be observed that the figures used in the discussion are as favorable to petroleum as could be chosen; to avoid the inconvenience of fractions, we have selected the nearest simple expressions which would make the best case for petroleum. Thus we have reckoned the gallon of oil at 7 lbs., the ton of \$6 per ton as 3½ c. per pound, and we have assumed that actual practice in burning oil and coal was fairly conformable to the ratio 3 to 2. As to the practical experiments, we regret we are obliged to say that, on the question to the economy of burning, they appear quite unsatisfactory. No authentic account of the economical results attained in the experiments with Colonel Foster's apparatus at the Charleston Navy Yard, or on board the gunboat Palos, has come to our notice. It is not a little remarkable that in the voluminous publications in newspapers and elsewhere the one most vital point was ignored; in the experiments with the same kind of apparatus at the Battery, in this city, the whole force of the steam evaporated seems to be used in blowing the fire under the boiler. In the experiments at the Brooklyn Navy Yard, which have been very skillfully conducted under the supervision of Lieutenant Clark Fisher, 12 to 15 lbs. of water were evaporated by 1 lb. of oil; but against this (in a discussion of economy) must be placed the steam raised by an independent boiler, which was used in urging the fire. Mr. Richardson, in some of his experiments at Woolwich, England, needed one-fifth of the whole steam evaporated to secure perfect combustion! So it appears that in practice thus far oil, of the weight for weight, has really done but little better than coal. We are of the opinion, however, that the ratio 3 to 2, by improvements in the burning apparatus, may be attained, but better than that nothing is to be hoped for, and perhaps nothing is possible. As the matter now stands, the use of oil for steam fuel seems almost chimerical; the discussion of such a question here seems a waste of good ink and paper. But petroleum fuel for ocean navigation has been so much praised that, deprecating the patience of our intelligent readers, we devote a few lines to its showing up. We use the simple figures which we have adopted above. A first-class ocean steamship puts on board 1500 tons of coal, of which she uses about 100 tons per day. At \$6 per ton, the cargo costs \$9000. An equivalent of oil, at 21 cents per gallon, would cost \$54,000. The difference between the cost of coal and oil is \$45,000; these are surely great figures for oil. But it is claimed that the use of oil will save the wages of firemen and coal passers, and a great amount of stowage. How much stowage room, if any, is to be saved after the oil is tanked that it will be safe does not clearly appear; but, for the argument, show one-fourth. The accounts of oil and coal respectively stand about thus: Cost of oil

THE GREAT REPUBLIC

GOLD AND SILVER MINING COMPANY.
Incorporated by Special Act of the Legislature of the State of Virginia, U.S.A., on the 25th day of January, 1867.

Capital \$200,000.
Of which \$150,000 have been fully paid up, and \$50,000 (equal to £100,000), in shares, at the rate of ten shares for each bond, have been deposited at the bankers for conversion.

ISSUE OF £100,000 SEVEN PER CENT. FIRST MORTGAGE BONDS.
Price of issue, £60 per £100; deposit on application, 20 per cent., balance on allotment.

The bonds now offered at the above discount are sterling coupon bonds of £50 each, bearing interest at the rate of 7 per cent. per annum, payable semi-annually, on the 25th of January and 25th of July, at the bankers, in London. The bonds are convertible, at the option of the holder, into fully paid-up shares at par, which shares have been deposited at the bankers in the name of the trustees in London for conversion, provided application is made for that purpose within three years, to the trustees in London, or at the company's office, Norfolk, U.S.A.

CHAIRMAN.
Major CHARLES W. BUTTZ, Norfolk, Virginia.
TRUSTEES IN LONDON.
EDWARD A. HADLEY, Esq., 6, Stone-buildings, Lincoln's Inn.
CHARLES H. PRIOR, Esq., 24, George-street, Hanover-square.
TRUSTEES IN AMERICA.
NATHANIEL D. PIGGOTT, Esq., Norfolk, Virginia.
BANKERS.
Messrs. PRESCOTT, GROTE, CAVE, and Co., 62, Threadneedle-street, London.
TREASURER.
SMITH G. TUTTLE, Esq., Norfolk, Virginia.
SOLICITOR.
W. H. SMITH, Esq., 132, Gresham House, Old Broad-street.
SECRETARY.
Mr. HARVEY B. LANCRAFT, Norfolk, Virginia.
OFFICES OF THE COMPANY.
No. 123, GRESHAM HOUSE, OLD BROAD STREET, LONDON.

NICHOLLS, MATHEWS, AND CO., ENGINEERS,
BEDFORD IRONWORKS, TAVISTOCK.
MANUFACTURERS OF STEAM ENGINES OF EVERY DESCRIPTION, made on the BEST AND NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the MANUFACTURE of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS OF EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON AND HEAVY SHAFTS OF ANY SIZE. CHAINS Lade of the best iron, and warranted. MINERS' TOOLS AND RAILWAY WORK OF EVERY DESCRIPTION. ALL ORDERS FOR ABROAD RECEIVE THEIR BEST ATTENTION. NICHOLLS, MATHEWS, and Co. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.
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FOR SALE.—A LIFT of 16-in. PUMPS and BOTTOMS, all in excellent order; a quantity of hammered iron STRAPPING PLATES, all in excellent condition; and a WATER-WHEEL, 25 feet diameter by 4 feet breast, nearly new.—Application to NICHOLLS, MATHEWS, and Co., Bedford Ironworks, Tavistock.

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CALL THE ATTENTION OF COLLIERY PROPRIETORS and others to the present favourable opportunities for the purchase of secondhand CORNISH PUMPING ENGINES and BOILERS at cheap rates. Plans, valuations, removal, &c., of every description of mining machinery undertaken.
FOR SALE, ONE superior 30 in. DOUBLE ROTATORY ENGINE.

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PERRANARWORTH, CORNWALL.
MANUFACTURERS OF STEAM PUMPING AND EVERY OTHER KIND OF ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery.
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Passenger carriages and wagons built, either for cash or for payment over a period of years.
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This company is prepared to furnish the above-mentioned articles in CAST STEEL of a very superior quality, made principally from their own well-known "BOWLING IRON."
Also BOWLING WROUGHT-IRON SOLID WELDLESS TYRES, of any size and to any section.

BAGILLT OIL COMPANY (LIMITED),
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MANUFACTURERS OF BLACK GREASE
FOR COLLIERY WIRE ROPES, TRAMS, WAGONS, &c., £5 PER TON
TORCH AND LAMP OIL, 1s. PER GALLON (Casks free).
LUBRICATING OIL, 1s. PER GALLON (Casks free).
ALSTON, CUMBERLAND.

FOR SALE, BY PRIVATE BARGAIN, the WHOLE INTEREST
of the present shareholders in
BIRCHY BANK MINE.
The take extends in length 600 fathoms, adjoining the Rodderupfell Mining Company's ground on the west, and in breadth 20 fathoms north of the north vein, and 20 fathoms south of the south vein.
Application to be made to Mr. JOHN PEART, Mining Agent, Alston; or Mr. INGLEDEN, Esq., Solicitor, Dean-street, Newcastle-on-Tyne.

STEEPLE ASTON IRON ORE COMPANY (LIMITED).
The property acquired by this company contains TWO BEDS or DEPOSITS of FIRST-CLASS IRONSTONE, estimated to be capable of yielding TWO MILLION TONS of that mineral. Both beds have been proved, and the ore can be readily sold in Staffordshire to yield 12s. per ton, its cost being about 7s. per ton; and a contract is about being entered into with an engineer to raise a daily quantity, which, allowing for all contingencies, will return a DIVIDEND of not less than FIFTY PER CENT. per annum on the paid-up capital.
Investors are recommended to apply to the Secretary for the full prospectus of this safe and genuine investment. There are only a few shares remaining to be allotted at par.
J. W. MARSHALL, Secretary.
95, Gracechurch-street, London.

HIRNANT LEAD MINE, MONTGOMERYSHIRE.
The above PROPERTY, not being disposed of by auction as advertised, on the 8th inst., WILL NOW BE OFFERED PRIVATELY.
To treat, apply to Mr. T. W. HILL, Auctioneer, Oswestry.—Oct. 9, 1867.

WHEEL BASSET.—WANTED, a ROTATORY ENGINE,
from a 24 to 28 inch cylinder, about 9 feet stroke, with or without BOILERS. Offers, stating particulars and lowest price for cash, also where to be seen, should be forwarded to the Committee on or before FRIDAY, the 18th instant.
Dated Wheel Basset, Redruth, 9th October, 1867.

WHEEL BASSET.—Notice is hereby given, that TENDERS
for the SUPPLY of GOOD MINING COALS to this MINE for six or twelve months will be RECEIVED up to FRIDAY, the 18th instant.
The requirements will be from 250 to 300 tons monthly. The quality of the coals to be approved of by the manager and engineer of the mine.
Sealed Tenders to be addressed to the Committee, Wheel Basset, Redruth.
Wheel Basset, 9th October, 1867.

CONNORREE MINING COMPANY (LIMITED).—Notice is hereby given that an EXTRAORDINARY GENERAL MEETING of this company will be HELD at their offices, 33, Westland-row, Dublin, on SATURDAY, the 19th instant, at the hour of One o'clock P.M., in order to take powers to raise a SUM not exceeding FIVE THOUSAND POUNDS for the purposes of the company, and to decide the mode in which such sum shall be raised.
By Order, GEORGE DEDRICKSON, Secretary.
33, Westland-row, Dublin, 9th October, 1867.

THE CHONTALES GOLD AND SILVER MINING COMPANY (LIMITED).—Notice is hereby given, that the SECOND ORDINARY GENERAL MEETING of the shareholders in the CHONTALES GOLD AND SILVER MINING COMPANY (LIMITED) will be HELD at the London Tavern, Bishopsgate-street Within, in the City of London, on TUESDAY, the 29th day of October, 1867, at Twelve o'clock.
The Transfer Books of the company will be closed from the 17th to the 30th days of October, both inclusive.
By Order, J. JAMESON TRURAN, Secretary.
185, Gresham-house, London, October 11th, 1867.

TACUARIL GOLD MINING COMPANY (LIMITED),
BRAZIL.
The number of SHARES required by the prospectus and Articles of Association of the above company, having been APPLIED FOR and ALLOTTED, the Chairman of the directors, Hugh Birt, Esq., late of the St. John del Rey Company, has gone out to complete the purchase of the property and take possession, and was accompanied by Capt. H. Pengelly and four Cornish miners, so that operations may be commenced without delay. Capt. Pengelly, from his former experience in the mine, entertains no doubt of being able to take out gold within two months of his arrival on the spot, and prove that the sanguine expectations entertained of the result have been fully warranted.
Messrs. J. B. MOORE and Co., of Liverpool and Rio de Janeiro, have been appointed agents of the company in Brazil.

SNOWDON SLATE QUARRY (LIMITED),
JOHN BOWER, Esq., D.C.L. Oxon, Managing Director.
TO BE SOLD, FIVE SHARES in this company (£87 10s. per share paid up), for £12 10s. per share.
Apply to "X. Y. Z." MINING JOURNAL Office, 26, Fleet-street, London.

LANFAIR GREEN AND BLUE SLATE QUARRY,
COMPANY (LIMITED).—Manager, T. HARVEY, Esq.—TO BE SOLD, FORTY SHARES, at £1 per share. No calls.—Address, "A. B." MINING JOURNAL Office, 26, Fleet-street, London, E.C.

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MESSRS. G. W. AND T. CRAIK
ARE PREPARED TO
SUPPLY COAL AND COKE WAGONS
OF EVERY DESCRIPTION,
Either for cash, or by preferred payments through wagon-leasing companies.
WAGONS PROMPTLY REPAIRED.

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Application to be made to Mr. BARRAS, Secretary, Rotherham.

RAILWAY WAGONS.
TO LET, on Redemption Lease or Hire, SECONDHAND BROAD AND NARROW GAUGE RAILWAY WAGONS, in good condition.
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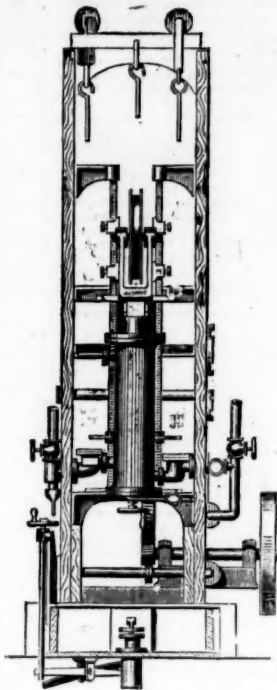
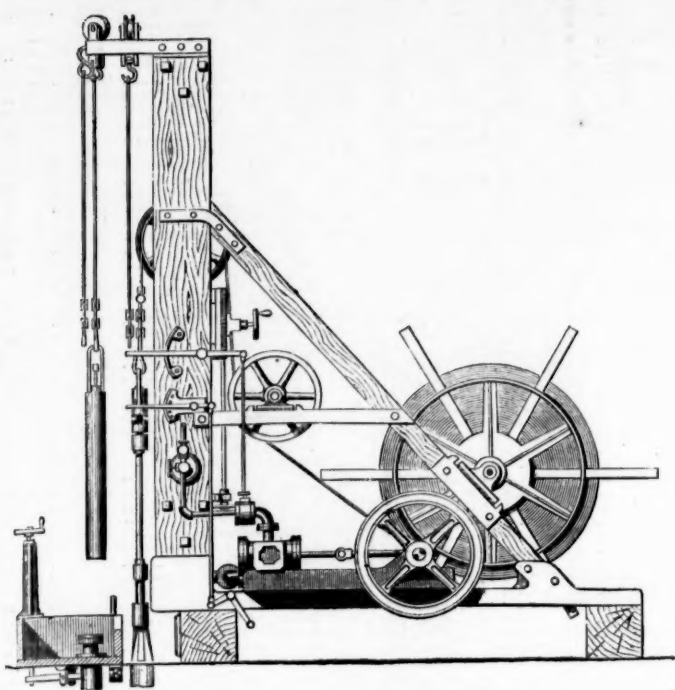
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INSTANTANEOUS COMMUNICATION with the STOCK and MINING EXCHANGES, avoiding the delay and annoyance of visiting the City to ascertain prices. A Monthly Investment Circular on application.

NOTICE.—CAPT. S. M. RIDGE, of LLANIDLOES,
MONTGOMERYSHIRE (late manager of the Brynastig and Cwm Fron Mines, and others, in Shropshire and Wales), is NOW OPEN to INSPECT and faithfully REPORT UPON ANY LEAD MINE in either of these localities that may be confided to his care, having had better than 30 years' experience in lead mining, as miner and agent.—Address, Capt. S. M. RIDGE, Llanidloes, Montgomeryshire.

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MINING AND REAL ESTATE AGENT,
AND PRACTICAL GEOLOGIST.
OFFICE,—No. 72, GRANVILLE STREET, HALIFAX, NOVA SCOTIA.
N.B.—Sales and purchases of lands, quarries, and mining property negotiated upon the most advantageous terms, and with all possible dispatch. Explorations made or supervised, and reports prepared where required with the utmost care. Public attention is called to the fact that, owing to his experience as Gold Commissioner and Chief Commissioner of Mines, and as one who has been for years engaged in practical mining and geological explorations, Mr. HAMILTON has had opportunities which no other person has heretofore possessed of becoming intimately acquainted with the mineral resources of Nova Scotia.

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The Machine is worked entirely by steam-power, requiring a small boiler, from 6 to 12 horse power, according to diameter of the bore-holes. The framing is made of wood, to render the Machine of easy transport.

The rate of boring is not appreciably decreased as the depth increases, as a flat rope is used in place of rods in the old system.

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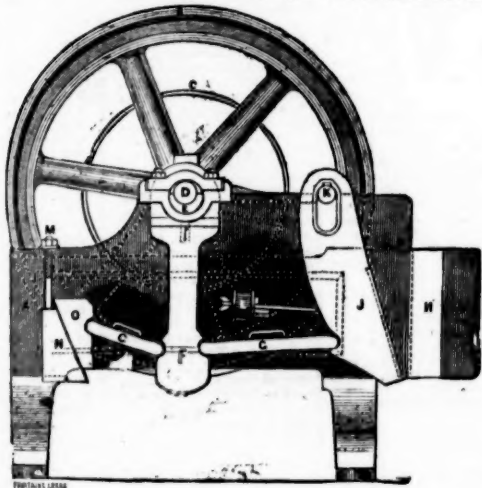
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FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



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Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust. Messrs. ORD and MADDISON, Stone and Lime Merchants, Darlington.

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Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "INTERNATIONAL EXHIBITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; and at the "UNIVERSAL EXHIBITION," in Paris, 1867.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS OF PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—EVERY COIL OF FUSE MANUFACTURED BY THEM HAS TWO SEPARATE THREADS PASSING THROUGH THE COLUMNS OF POWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS AS THEIR TRADE MARK.

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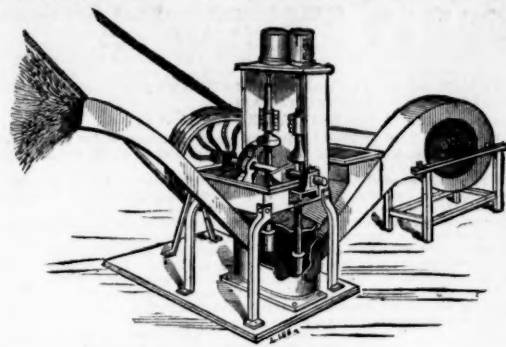
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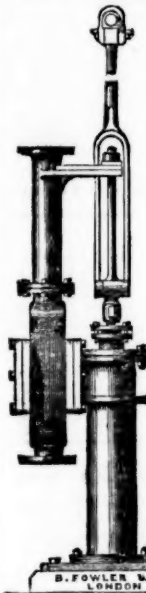
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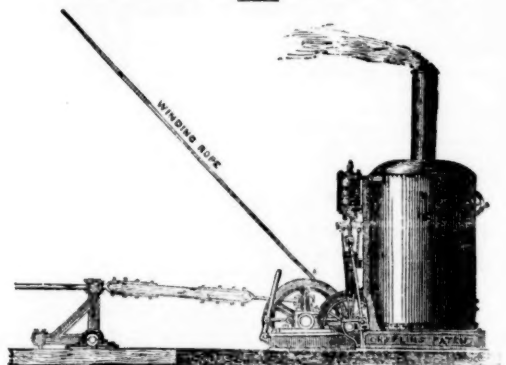
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SIMPLE and STRONG; require NO FOUNDATION or CHIMNEY STALK, and are

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Stationary Engines, 1 to 30-horse power, with or without gearing.

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